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## Offender Treatment: An Evaluation of a Cognitive Restructuring Program

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OFFENDER TREATMENT: AN EVALUATION OF A  
COGNITIVE RESTRUCTURING PROGRAM

by

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A Dissertation  
Submitted to the Graduate Faculty  
of the  
University of North Dakota  
in partial fulfillment of the requirements  
for the degree of  
Doctor of Philosophy

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2004

This dissertation, submitted by Randy L. Telander in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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## ABSTRACT

The United States is first among industrialized nations in the rate at which we imprison offenders. With ever-increasing numbers of incarcerated offenders and continued high recidivism rates, many institutions have begun implementing treatment programs in attempts to combat crime and reduce recidivism rates. With high costs to all of society (including victim losses and costs to prevent, convict, and imprison offenders), it is important for correctional officials to know the extent to which programs are facilitating or inhibiting offender change. However, despite many reported program evaluations being published in the literature, many have identifiable flaws and few, if any researchers have been able to solve random sampling problems owing to low scientific rigor and results that are not robust.

The present study utilized recently developed scales to measure criminal thinking change and randomized participants into treatment and control groups in an attempt to evaluate a widely used cognitive change program implemented by the North Dakota Department of Corrections and Rehabilitation. Analyses reviewed change in seven criminal thinking scales from two different measures, the relationship between criminality and change in criminal thinking, whether external attributions of blame related to criminal thinking change, and the extent to which IQ was a mediating factor.

Results revealed no significant change and/or relationships for the aforementioned analyses. Additional post hoc analyses provide modest support for some hypotheses. Suggestions for future research are provided including the need for adequate sample size and on site research personnel.



## CHAPTER I

### INTRODUCTION

Crime committed against individuals and/or society at large has historically been a concern for individuals, society in general, and government. In fact, "crime affects all of us" (Samenow, 1984). We cannot leave our homes, automobiles, and at times, loved ones without taking appropriate measures to insure we are not victimized. According to National Crime Victimization Survey data, approximately 24.2 million violent and property crimes were experienced by Americans age 12 or older in 2003 (Statistics, 2004). In 2002-03, 23.5 out of 1000 Americans experienced a personal crime and 161.1 out of 1000 experienced property crimes (*U.S. Department of Justice Bureau of Justice Statistics*, 2002). The reported cost of all crimes to victims in 2001 can only be approximated in dollars, which reached a total of 13.38 billion (B. O. J. Statistics, 2001). However, the cost in loss of meaningful possessions that do not have a dollar value is immeasurable. And, perhaps most importantly, the extent of losses in terms of emotional and psychological well being as a result of being victimized is unknown.

The cost of crime does not end with those costs experienced by victims alone; there are high costs to society as well. One may begin to gain an appreciation for the amount in general societal costs if one considers the time and money spent by citizens and commerce to combat crime. Preventative measures (e.g., employing security personnel, purchasing items to ensure security, etc.) are not only costly, but require time.



In addition, when one considers paying for policing, court systems, parole, and probation, the cost is realized to be so high and the variables almost endless so that acquiring some degree of measurement accuracy is impossible. However, one measurable cost is that incurred to combat crime. In 2001 correctional authorities spent \$38.2 billion to maintain the Nation's State correctional systems, including \$29.5 billion for adult correctional facilities (B. o. J. Statistics, 2001). Additionally, the average annual operating cost per state inmate in 2001 was \$22,650 or \$62.05 per day.

The United States is first among industrialized nations in the rate at which we imprison our people (Sheridan, 1996). Krus and Hoehler (1994) reported that in 1991, the United States had the largest per capita rate of incarceration in the world with South Africa running at a distant second. Flanagan (1991) reported that "long-term prisoners are a growing segment of the State and Federal corrections population that poses formidable challenges for administrators" (p. 109). The American population seems to be in favor of fighting crime by arresting and sending more offenders to prison. President Clinton successfully implemented policy in which 25,000 more police officers were hired to combat crime. Just prior to that, President Bush suggested implementation (several states adopted the proposal) of the "three strikes and you're out rule," which required courts to sentence those who have committed three crimes to prison as a strategy in his "war on crime." Moreover, "American penology is noted most singularly for its seemingly endless capacity to accommodate record-breaking rates of incarceration" (Porporino & Baylis, 1993).

In a 1993 Canadian parliamentary standing committee review, Horner (1993) introduced its report with the statement "If locking up those who violate the law

contributed to safer societies, then the United States should be the safest country in the world” (p. 2). Horner’s statement may not be entirely inaccurate. According to National Crime Victimization Survey (2000) data, the overall crime rate declined from 1994 to 1999. Violent victimization rates fell 34% over that period and the personal theft rate has fallen from 2.3 to 0.9 per 1,000 persons age 12 and older. One might begin to believe that the so-called war on crime is being won and that the above distressing statistics will decline. That is unlikely, because although society is experiencing less victimization, more victimless crimes are being committed. Of the 29 categories for arrests listed in the Bureau of Justice Statistics *Sourcebook of Criminal Justice Statistics* (2001), drug related arrests for adults increased by 41.5% from 1991 to 2000. The next closest increase was 32.7% for arrests for offenses against family and children; however, the total arrests for that category were 64,725, compared to 736,539 for drug arrests. Additionally, drug trafficking accounted for 45% of all incarcerations in 2000, followed by immigration offences at 20%. Of the 32 categories of offenses, the average length of sentence for drug trafficking ranked 4<sup>th</sup>, at 75.3 months.

Not only does the United States reveal the highest incarceration rates, the Bureau of Justice Statistics (BOJ) reported that incarceration rates are skyrocketing. For example, the BOJ (2001) reported that the number of incarcerated offenders under State and Federal jurisdiction per 100,000 increased from 139 in 1980 to 470 in 2001. The number of male adults in the correctional population increased by two-thirds from 1986 to 1997 while the number of females doubled. In 1990, 1,148,702 men and women were incarcerated in state and federal prisons, but that number increased to 1,962,220 by 2001.

Sheridan (1996) also reported that male imprisonment increased by 112% during the 1980s and the female prison population increased by 202% during the same period.

Increased incarceration will eventuate an increased release of offenders. Beck and Mumola (1990) reported that 40% of all prisoners are expected to be released from prison within the next 12 months and 95% are expected to be released at some point in the future. In addition, recidivism rates remain high. A Bureau of Justice Statistics *Special Report on Recidivism of Prisoners Released in 1994*, revealed that 67.5% of criminal offenders were rearrested within three years. But even more sobering than the high rate is the fact that recidivism seems to be rising—a similar study in conducted 1983 revealed a lesser recidivism rate of 62.5%. In consideration of the aforementioned statistics, it is likely that we will continue to experience high incarceration rates with high cost to society.

With recidivism rates remaining high, incarceration as a form of correction is suspect. Ortmann (2000) reported that prison success regarding rehabilitation is low, that prison is also an extremely unfavorable place for a positive correction of people, and that “the benefit of correctional treatment in prison for society is apparently overrated” (p. 214). However, other researchers suggest that rehabilitation programs are effective in reducing recidivism (Andrews et al., 1990; Gendreau & Ross, 1979, 1987; Greenwood & Zimring, 1985; Palmer, 1983). In addition, meta-analytic reviews of programming literature support reduced recidivism resulting from intervention (Lipsey & Wilson, 1998; Redondo, Sanchez-Meca, & Garrido, 1999). Upon examination of the rehabilitation literature, this researcher discovered that many have concluded that the



most successful rehabilitative programs are those addressing an offender's cognition (Gendreau & Ross, 1979; Henning & Frueh, 1996; Samenow, 1984).

Cognition or the cognitive restructuring approach refers to programs designed to remediate thoughts or criminal-type thinking that are reported to be common to those engaging in criminal behavior. It is believed that offenders serve to justify their criminal behavior by utilizing such thoughts as "he deserved it," or "she has a lot of money and so losing this jewelry has little significance". Additionally, cognition related to criminal behavior can include the lack or absence of certain thoughts such as those that serve to keep others from committing crimes (e.g., "I will be causing harm to others").

#### Statement of the Problem

With the continual rise in the prison population coupled with high recidivism rates, it is likely that any appreciable decline will not be realized in the near future. With that, the cost to society of incarcerating high numbers of offenders remains significant and will also likely continue to grow. The question remains—what can be done to safeguard ourselves, but stop the continual increasing demands of incarcerating offenders?

Schwartz and Travis (1997) reported four purposes for incarceration: deterrence, incapacitation, retribution, and treatment. Deterrence works to prevent individuals from committing crimes; however, it did not work for those who committed crimes and are serving time in prison. Incapacitation (securing the offender in prison) only serves to stop crime while an individual is in prison, and retribution or punishment seems to have little long-term effect, given the current high recidivism rates. Only a treatment approach suggests that imprisoning an offender is or can be rehabilitative.

There appears to be a need for change in the way society handles violators of the law. One option is to send fewer perpetrators of crime to prison, which would mean changing laws or providing some sort of supervision outside of prison (unlikely to result in less cost or more safety). But additionally, that is unlikely to happen given the current social milieu regarding what to do with those who commit crimes in the United States. However, working to change the effect incarceration has on the offender or, more specifically, working with the offender to affect behavior change, thus reducing recidivism may be a viable approach. While treatment in prisons does exist (Wang, Owens, Long, Diamond, & Smith, 2000), again, some researchers have suggested that corrections programming is untested and unproven (Ortmann, 2000; Petersilia, 1991) and that implementing effective evaluation is problematic (Kratcoski, 1994).

There is a need to better understand the effect treatment is having. With high costs to incarcerate and then treat the current staggering numbers of prisoners, knowing the extent to which treatment is effective is in order.

#### Purpose of the Study

In this study, the effect of providing cognitive treatment for criminal thinking was explored. While some researchers suggest treatment is effective (Andrews et al., 1990), others conclude that it is not (Ortmann, 2000). Additionally, after a review of the literature, those who evaluate the criminal justice system reported that not enough is known regarding successful programs (Office of Justice Programs, 1996). The purpose of this study is to understand the extent to which treatment for criminal thinking does in fact change cognition, which would in turn affect future lawful or unlawful behavior and consequently, incarceration rates and public safety.

It was the general hypothesis of this study that after receiving treatment focused on changing criminal thinking, including taking responsibility for one's behavior, a participant's thought processes would change.

By conducting this research, it is hoped that the results will contribute to the body of research evaluating treatment to change criminal thinking and behavior. It is hoped that the knowledge obtained from this project will provide information to serve those interested in furthering our understanding of the effects of treatment to change criminal thinking among offenders and to provide another example of how a valid evaluation process can be achieved.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Cognitive Treatment

A treatment approach, as opposed to simple incarceration and then release, to manage offenders and reduce recidivism has been used in the United States since early in its history. By the 1950s, providing treatment for offenders by prison officials had become a dominant force (Wang et al., 2000). Throughout the 1950s and the 1960s reviews of the successes and failures of such approaches were beginning to be published. However, much of the literature reported finding little difference between those receiving treatment and controls. Perhaps the darkest moment regarding the consideration for treatment for incarcerated offenders came when, after an extensive evaluation of offender treatment programs, Martinson (1974) reported that rehabilitation does not work. Martinson (1979) later recanted, stating that “some treatment proponents do have an appreciable effect on recidivism” (p. 224).

Since Martinson’s initial and subsequent findings, several reviews of the literature have reported positive effects from treatment programs provided to incarcerated offenders. Cullen and Gendreau (1992) reported that a substantial body of literature supports the notion that treatment works. “Treatment,” as used previously and hereafter in this document, refers to a treatment focus specific to reduction in general criminal behavior or change in thinking, not regarding alcohol or drug abuse treatment or more



recent sex-offender treatment programs. While researchers have concluded that treatment is effective, several suggest that the most successful correctional programs are those treatment models that address offenders' cognitive functioning (Gendreau & Ross, 1979; Husband & Platt, 1993; Izzo & Ross, 1990).

The cognitive theory of criminal behavior is not a new concept. The psychiatrist William Healy (1915) suggested as early as 1915 that "the only way to ascertain the driving forces which make for social offense is to get at the mental mechanisms" (p. 28) and further suggested that social and biological theories of crime are not credible. But, more recently, Baro (1999) reported that "although these types of programs are not new to corrections...cognitive intervention has taken on the proportions of a treatment reform movement" (p. 466). The Canadian Correctional Service chose cognitive restructuring as its treatment strategy in the 1980s and by 1995 similar programs could be found in many states including Oregon, California, Georgia, Vermont, and Michigan.

Not all cognitive programs are identical; however, they share the common theoretical assumption that cognitive deficits (e.g., limited abstract reasoning) and/or cognitive distortions (e.g., denial of responsibility) are criminogenic, meaning that they are characteristics which sometimes lead to and/or assist in supporting criminal behavior (Henning & Frueh, 1996). Perhaps the leaders and those most influential in the development of theory related to the cognitive approach to explain criminal behavior are Yochelson and Samenow. Their seminal works, "The Criminal Personality: A Profile for Change" (1976) and "The Criminal Personality: The Change Process" (1977) laid the ground-work for what continue to be the fundamental aspects of cognitive restructuring programs for criminal behavior.



Yochelson and Samenow (1976) reported that, based on their experience as treatment providers, “criminals” could choose to behave in a criminal way or not. They found that criminals could choose to behave in a noncriminal way in order to convince authorities that they had recovered from their criminality. Yochelson and Samenow thus maintained that criminal thinking, not psychological and or sociological problems is the cause of criminal behavior. After dispensing with approaches in which past personal and sociological experience were considered the etiological factors of criminal behavior, they focused their treatment on personal responsibility. Instead of reviewing past traumas, they focused on how the offender had traumatized victims. Instead of a focus on what others had done to the offender, they focused on what the offender had done to others. Eventually (after several years of working to improve their knowledge of what constituted typical cognitions of the criminal mind) they began to better understand and conceptualize criminal “thinking errors.” Indeed, they further contended that psychological, psychiatric, and sociological techniques and concepts that were effective in treating noncriminals were not applicable to criminals—at least not in the sense of attempting to facilitate change in those engaging in criminal thinking and criminal behavior. It should be noted that Yochelson and Samenow used the term “criminal” throughout their texts and although perhaps more appropriate terms for referring to those who have been convicted of a crime have recently been introduced (e.g., offender), the term criminal will be used when referring to and describing their work as well as elsewhere, when deemed appropriate, so as not to lose the exact nature of their thesis and/or misrepresent their meaning.

The basic criminal thinking errors that Yochelson and Samenow (1976) identified include the following list of 16: (a) Criminals tend to fail to disclose truthful information as doing so would expose their criminal behavior, open themselves to the scrutiny of others and reduce self esteem, and force self-criticism; (b) criminals tend to believe that there is nothing they cannot do—only when confronted with a suggestion for change will criminals report that it is something they are incapable of doing; (c) when confronted with the criminal nature of his behavior, the criminal tends to take a victim stance; (d) they have a general lack of time perspective; they tend to lack the desire or ability to plan for the future and also seem not to learn from past mistakes; (e) the criminal rarely considers what other people think, feel, and expect; if the criminal does imagine himself in another's place, it is only done so in order to assist in planning and carrying out the crime; (f) they do not consider the ramifications of their behavior as it affects others including harm and injury to others; (g) criminals fail to assume and carry out obligations; they view obligations as interfering with what they want to do; (h) the criminal tends not to assume responsible initiatives; when energy and initiative are displayed, it is only for self-gratification and not necessarily in the direction of what is socially acceptable; (i) criminals tend to assume ownership of things and people; just the simple desire for an object or person entitles the criminal to own it or him/her; (j) the criminal's display of confidence and/or fearlessness is really a cover as he/she are actually afraid of fear—the fear of fear is what fuels their need for self-esteem, (k) criminals do not trust others; (l) criminals refuse to be dependent; dependence is viewed as a weakness and would render them vulnerable; (m) the criminal is disinterested in developing within a framework of responsibility; (n) criminals tend to be pretentious,

they hold on to self-concepts as being superior to others; however, they are unwilling to do what would actually be required of such a person—they are often underachievers; (o) the criminal fails to endure the hardships and obstacles of responsible life; while most responsible people struggle through the unwanted tasks of life, the criminal will find ways out or simply refuse to do them; and (p) finally, the criminal evidences poor decision-making for responsible living; the criminal does not save or budget money and there is little weighing of pros or cons—decisions are made for the immediate moment.

Yochelson and Samenow's second volume (1977) offers guidance for effecting change regarding criminal thinking. Key in the change process is responsibility, that is, responsibility on the criminal's part for deciding whether or not he/she wants to change and changing past thinking patterns into ones in which the criminal thinks responsibly. The agent of change suggested by Yochelson and Samenow is cognitive change groups in which a trained facilitator and similar criminal group members work on changing such problem cognitions. They suggested that the 16 fundamental cognitive errors reported above be addressed in the group treatment.

#### Attributions

One particular type of thinking error, reported above, that deserves additional comment is the tendency of criminals to lay blame on others (e.g., their victims, society, alcohol etc.) or more generally, the tendency to not accept responsibility for their actions. It is generally believed that the extent to which the offender is able to accept responsibility marks the cornerstone of whether or not treatment will be effective. Kroner and Mills (in press) report that "Greater acceptance of responsibility of one's actions is a desired target or outcome of many treatment programs that attempt to reduce the



likelihood of antisocial acts.” Additionally, a basic tenet necessitating efficacy when using many other general treatment models (e.g., reality therapy), is that the client take ownership of his/her behavior and accept responsibility for the direction of his/her life (Glasser, 1965). Similarly, Yalom (1985) writes, “the patient bears the responsibility for the creation of his or her world, and therefore, the responsibility for its transmutation” (p. 176). In one successful sex-offender treatment program at Northeast Human Services Center in Grand Forks, North Dakota, offenders are not allowed to begin treatment until they have made a statement in which they have accepted some degree of responsibility for the offense (M. Veenstra, personal communication, June, 2002). When this writer provided treatment for domestic violence to offenders (who had been convicted of a domestic violence charge and were court ordered to treatment), the ability to understand and accept the concept of accountability by the offender was paramount in moving to the advanced stages of treatment. Bush and Bilodeau (1993) in the manual for the Options: A Cognitive Change Program for changing criminal thinking report “Accountability for their behavior is an essential element of the program” (p. 5-1).

One might logically assume that the cognitively treated offender would be inclined to accept responsibility due to his/her treatment/education concerning the subject. But, one might also theorize that incarcerated offenders without treatment would move toward accepting responsibility, given that they were convicted of the crime and the remedial effect that incarceration in a “correctional” facility is believed to have on offenders. However, Wright (1993) suggested that prisons have their own psychosocial characteristics and social climate, which require the inmate to adapt to a different lifestyle than he or she is used to and one that does not serve him in remediating his behavior.

Additionally, with recidivism rates remaining high, one may also assume that incarceration without treatment will not serve to effect change in attributions of responsibility.

### The Options Treatment Program

I reviewed studies in which a cognitive treatment, utilized to reduce criminal thinking in support of a criminal lifestyle, was similar to or addressed many of the cognitive distortions that Yochelson and Samenow found to be a prominent feature of criminal cognition. One such program reviewed in more depth and used in several prisons including a somewhat shortened, modified version used by the North Dakota Department of Corrections (NDDOC) is Options: A Cognitive Change Program (Bush & Bilodeau, 1993). The Options program is intended to teach offenders "to identify their habits of thinking that directly connect with their criminal behavior" (p. 1-2). Bush and Bilodeau report that "many offenders are accustomed to feeling unfairly treated and have learned a defiant, hostile attitude as part of their basic orientation toward life and other people" (p. 1-3). Theoretical underpinnings of the Options program suggest that offenders have developed a "thinking network" composed of isolation, entitlement, power struggle, victimization, righteous anger, and retribution. Additionally, motivating offenders to change themselves is a primary goal of the Options program and is actually designed for offenders who are antisocial. Responsibility and accountability for behavior are not forced upon the participant, but similar to Yochelson and Samenow (1976), are reported to be part of their motivation to change. The ultimate goal of the program is the reduction of antisocial behavior.

The Options program consists of three phases. In Phase I the participant learns basic principles of cognitive self change, how to do “Thinking Reports”, to identify one key pattern of criminal thinking or risk behavior, and to identify one realistic alternative to the criminal thinking/risk behavior pattern. Phase II consists of (a) identifying key patterns of thinking connected with criminal behavior—past, present, and future; (b) planning and practicing interventions, and (c) preparing a relapse prevention plan. Phase III is devoted to self-risk management organized around the relapse prevention plan completed in Phase II. The NDDOCR uses Phases I and II in their program. NDDOCR officials report that completion of the Options program requires 18 to 26 weeks of participation.

#### Current Research

While reviewing the literature, several outcome studies measuring the effects of cognitive treatment for change in criminal thinking were found. Two recent studies are described below.

Baro (1999) evaluated change in institutional behavior of offenders who completed the Strategies for Thinking Productively (STP) program. Those who completed the STP program were compared with those who did not. The STP program consists of two parts. In Phase I, groups meet for 14 sessions, two times per week for 90 minutes over an eight-week period. In addition to general orientation, participants are taught basic principles of cognitive self change, how to develop thinking reports and keep personal journals, to identify thinking patterns that lead to criminal behavior, and to identify realistic alternatives and interventions. In order to successfully complete Phase I, participants are required to demonstrate familiarity with the basic principles of the STP



program. In Phase II, participants practice what they learned in Phase I by continuing to write and discuss their “thinking reports” (e.g., descriptions of past problematic situations and associated thoughts, attitudes, and beliefs) and keep a personal journal that they discuss with staff. They also work on identifying patterns of thinking connected with criminal behavior and then identify alternative strategies and behaviors. In order to successfully complete Phase II, participants are required to demonstrate competence in observing thoughts and feelings, recognize the criminal risks associated with certain thoughts and feelings, show an ability to utilize new thinking patterns to reduce risk, and demonstrate the ability to apply the steps to real-life situations.

Comparisons were made between randomly selected inmates who completed Phase I, randomly selected inmates who did not participate in STP, but participated in other self-help programs, and all participants who remained in the Phase II program for six months. The dependent variables were institutional assaults, disobeying a direct order, number of major misconducts, days of detention, days lost, and transfers to higher-security facilities.

Results revealed significant differences between the three groups in support of the program effectiveness. The specific differences were found regarding disobeying direct orders, assaults, and days of detention; however, days of detention is affected by assaults as those with an assault charge are given more detention. Interestingly, in consideration of disobeying a direct order, those who participated in Phase I showed the greatest positive change for that variable. For assaults, those who completed Phase II were found to have engaged in significantly fewer assaults compared with the two other groups.

Baro reported, that no significant differences were found with major misconducts. She added that most of the 25 classifications of major misconducts can be defined as forms of serious antisocial behavior; that the STP program is designed to change cognition related to that behavior; and that the results are disappointing. Baro suggested that the difference in results regarding the positive effects found on the disobeying a direct order and assaults variables compared to the insignificant results for the misconduct variable might be related to staff behavior. As part of the STP training, facilitators are trained to depersonalize conflict and to personalize cooperation. Baro suggested that such change in staff behavior and attitudes may have a significant effect on offender's ability to cooperate, communicate, and understand consequences related to one's attitudes and behavior, which lends to the positive change revealed regarding the first two variables. Additionally, Baro reported that the continual attention Phase I and II participants receive may be an influencing and confounding factor regarding results. Apparently, participants in those programs are held in closer scrutiny by staff and staff may have generally higher expectations for program participants. Finally, Baro reported that those who were in the Phase II program for longer than six months as opposed to those who were in the program for less than six months showed time effects. Baro concluded that treatment participants might reach a plateau such that a point is reached in which continued treatment has little or no positive effects. A similar time effect was also seen regarding change on the disobeying a direct order variable. Significant change was only seen in those who participated in Phase I for the disobeying a direct order variable and not for those who also completed Phase II.



Baro concluded that weaknesses of the study included not being able to randomly assign participants to the treatment groups and having few independent variables. She further suggested including additional independent variables such as demographics and criminal-types (e.g., criminal history including prior incarcerations and length of sentence). Baro acknowledged that because so few participants completed Phase II, the study was limited by not being able to compare them to those who completed Phase I. She also acknowledged that like most correctional program evaluations, her study was conducted under less than desirable circumstances so that strong conclusions cannot be drawn.

McGuire and Hatcher (2001) evaluated the cognitive based Offense-Focused Problem-Solving Program designed to teach participants social skills that are then applied to their offenses and situations in which they occur. The skills taught include: problem awareness, problem definition, information gathering, distinguishing facts from opinions, alternative-solution thinking, formulating means-ends steps, consequential thinking, decision making, and perspective taking. In addition, group sessions addressed the following criminogenic factors: self-management, social interaction training, and attitudes and values. The program consisted of 21 two-hour group sessions with up to 10 participants per group and usually completed within 11 weeks. The program was delivered to offenders who were placed on probation in England.

McGuire and Hatcher (2001) hypothesized that the participants would exhibit a decrease in antisocial or criminogenic attitudes, that they would show a stronger belief in their ability to influence their own life events, reveal a reduction in their belief in the influence of chance, and increase self-esteem. It was also hypothesized that after program

completion, participants would have a lower impulsiveness as well as empathy score. Overall, it was hypothesized that scores on all measures would be significantly reduced. The evaluation included recording attendance and attrition, and a pretest/posttest design using four self-reported psychometric scales, which were: The Crime-PICS II Questionnaire (Frude, Honess, & Maguire, 1994), Locus of Control Scale (Levenson, 1973), Self-Esteem Scale (Rosenberg, 1965), and the Impulsiveness Questionnaire (Eysenck & Eysenck, 1991). The Crime-PICSII Questionnaire is designed specifically for use by probation and social services and offers a means of assessing attitudes toward, and risk of, reoffending. The Locus of Control Scale measures one's beliefs concerning his/her ability to control events in his/her life. The Self-Esteem Scale was included not because it is related to criminogenic thinking, but because strengthening self-image is a concern of probation staff working with offenders. The Impulsiveness Questionnaire was included (however, was not administered to all participants) in order to evaluate that aspect of general criminal behavior associated with having little concern for the future.

Results of the study revealed several interesting correlations. For example, a significant positive relationship was reported between reported problems and the variables of general attitude to offending and anticipation of reoffending. Such correlations support attempts to remediate thoughts associated with antisocial attitudes and/or thinking. Another interesting correlation revealed in the study was the negative relationship found between self-esteem and the variables of general attitude to offending and anticipation of reoffending. McGuire and Hatcher suggest that as an offender's attitude becomes more prosocial, self-esteem may increase.

McGuire and Hatcher performed repeated measures *t* tests to reveal significant differences from pretest to posttest on the dependent variables. Posttest measures were significantly different in the directions hypothesized than pretest for the following variables: belief in chance, general attitudes to offending, anticipation of reoffending, victim hurt denial, and self-esteem. McGuire and Hatcher suggest that while the results were less than dramatic, there exist potential positive effects from completing the program. They also stated that further follow-up procedures to include recidivism data is warranted and will assist to support the efficacy of the program.

McGuire and Hatcher reported that after completion of the study, the treatment program format underwent extensive revisions (in part to meet accreditation standards). Additionally, they reported that future analyses will include procedures to monitor program delivery and assurance of treatment integrity. They also suggest that while the treatment model can be clearly specified for use by practitioners, many questions are left unanswered regarding the implementation of the program within correctional facilities.

Although reviewers of correctional treatment studies have found that cognitive treatment serving to combat offenders' criminal proclivity have been successful, efficient utilization of these services are in order (Andrews et al., 1990; Gendreau & Ross, 1987). Offering treatment to all offenders is not necessarily advantageous. For example, an offender who is incarcerated for a first offense committed while intoxicated may indeed not have chronic antisocial tendencies (however, he/she may benefit from substance abuse treatment). Andrews et al. suggested considering risk, need, and responsivity as helpful linkages in maximizing efforts. The risk principle refers to providing higher levels of service for higher risk cases or those believed to be more inclined to reoffend.



Andrews et al. note that effects of treatment are generally found to be greater among higher rather than lower risk cases. The term “needs” (also known as “criminogenic needs”) refers to identification with the dynamic risk factors (e.g., antisocial attitudes, familial affection, identification with noncriminals, self-control and self-management skills etc.). Good programming (programming that is shown to be most effective) targets dynamic risk factors, which increases rewards for noncriminal activity. Lastly, responsivity relates to providing the styles and modes of service that are matched to meet the targets for offenders and match learning styles. Generally, analyses have shown that treatment incorporating behavioral and social learning principles, skill enhancement and cognitive change affect the greatest change.

In their meta analysis, Andrews et al. (1990) found significant positive correlations between treatments that met the criteria of risk, need, and responsivity and phi coefficients (effect size). Results also indicated that those studies reviewing treatment in residential correctional facilities experienced lower phi coefficients compared to community facilities (.20 compared to .35, respectively). Additionally, those treatment models deemed inappropriate performed worse in residential compared to community settings (-.15 and -.04 respectively). Andrews et al. did not elaborate a hypothesis as to why differences were found, but suggested that institutions and residential settings may dampen the positive effects of appropriate treatment.

#### Outcome Measures

Historically, the traditional measure of treatment effect used in correctional research has been recidivism rates (Maltz, 1984). Recent cognitive program/treatment evaluations have found significant positive effects using recidivism as the dependent

variable (Allen, MacKenzie, & Hickman, 2001; Henning & Frueh, 1996). Although the results, at first glance, seem promising, the use of recidivism as the dependent variable is not without problems.

Of first concern is the researchers definition of recidivism. The definition may include only conviction, but then the researcher must determine whether recidivism constitutes conviction for a felony, misdemeanor, failure to pay child support, traffic ticket, etc. Additionally, one must contend with the influence of the criminal justice system (e.g., plea bargaining, evidence problems, and quality of defense counsel). The researcher may in turn decide to use arrest as the measure of recidivism. However, one is left with additional problems, including the consensus that arrests are made based on a somewhat subjective decision made by the arresting police officer as well as the most obvious problem—the violation of the presumption of innocence until due process has occurred. Moreover, one is left again having to determine which arrests are included—felony, misdemeanor, etc.

The problems associated with using recidivism as the dependent variable in a program evaluation study can become more complex. Boudouris (1984) offers several complex scenarios in which much of the arrest data are complicated by who arrests, why he/she arrested, and whether or not the arrest is significant when considering past offenses of the arrestee. Additional complications include: potential flaws related to who actually compiles the information, problems with the accuracy of the differing agencies that store such data, and coding methods used by the researchers of the relevant study. One must also consider time of occurrence, as recidivism rates increase with time and

recidivism studies may collect data at differing time periods (e.g., one, three, five years etc.).

Lastly, a final problem associated with recidivism studies is that when using recidivism as the dependent variable, one can never account for those who continue to offend and do not get arrested. One can reason that as criminals continue to commit crimes they are less likely to be caught because over time, their criminal skills continue to develop thus they become more proficient at committing crimes.

Some recent studies evaluate changes in institutional disciplinary infractions as the dependent variable when evaluating cognitive treatment (Baro, 1999; Walters, 1999; Wang et al., 2000). Such studies reveal a significant decrease in criminal behavior while incarcerated. The results suggest that the treatment participants have gained an understanding of the concepts taught in treatment and are making good use of their new knowledge and new thinking patterns. In fact, the reduction in disciplinary infractions while incarcerated may be adequate reason for implementing such programming. For example, reducing problematic behavior in prison may, in the long run, reduce loss in property or property damage, staff stress, and the number of staff necessary to maintain safety and reasonable comfort. Additionally, reducing disciplinary infractions would lessen the number of inmate lawsuits, which also reduces operating costs. In fact if an offender commits fewer disciplinary infractions, he is likely to be released sooner. However, one is left wondering whether this significant change while incarcerated will generalize to life or behavior when released and the offender is living outside of prison and in society.



While Zamble and Porporino (1990) suggested that institutional adjustment may predict future recidivism, the evidence is modest. Life outside of prison is quite different from living within an institution. The former criminal has many more opportunities to commit crime and will be faced with many differing situations in which he must make noncriminal/legal choices. Moreover, within an institution, the offender's daily contact with unsuspecting individuals who do not know of his criminal past is nonexistent and his behavior can be maximally controlled. Perhaps a better evaluation of programming intended to change criminal thinking is utilizing a method in which the criminal's cognitions are reviewed. In recent years several instruments have been developed to evaluate criminal thinking.

#### Instruments

The Criminal Sentiments Scale-Modified (Simourd, 1997) and the Pride in Delinquency Scale (Shields & Whitehall, 1991) are instruments currently used with criminal populations. These particular instruments evaluate the content of criminal thought, correlate with criminal behavior, and are also suggested to be capable of predicting recidivism. However, Walters (1995) has developed the Psychological Inventory of Criminal Thinking Styles (PICTS) which focuses on the criminal thought process in addition to dimensions of criminal thought content. Criminal thought process accounts for conditions (including internal or external influences) and choice (which refers to decisions and subsequent reinforcement) that interact with cognitions to assist in maintaining a belief system. The belief system then serves to support a criminal lifestyle that shields it from corrective experiences.

The PICTS was originally constructed for the purpose of assessing eight criminal thinking styles believed to be essential in maintaining a criminal lifestyle (Walters, 1990). The eight scales (along with descriptions) of the PICTS are as follows: (a) *Mollification*; Mollification relates to efforts by the participant to evade responsibility and view oneself as the victim of external forces, (b) *Cutoff*; the Cutoff scale measures the capacity to utilize common deterrents to crime such as fear of incarceration, (c) *Entitlement*; this refers to the participant's sense of privilege and/or ownership that gives the individual permission to carry out criminal behavior, (d) *Power Orientation*; this scale measures the desire to acquire power over the social environment through manipulation, intimidation, or interpersonal violence, (e) *Sentimentality*; maintaining a personal sense of being a nice guy in light of criminal behavior is measured on the Sentimentality scale, (f) *Superoptimism*; the Superoptimism scale refers to the belief that one can continue to pursue a lifestyle of criminality without suffering negative consequences, (g) *Cognitive Indolence*; this scale measures short-cut thinking and lack of critical reasoning, and (h) *Discontinuity*; Discontinuity refers to lack of consistency in one's thoughts and actions.

Walters et al. (2002) found that no single PICTS scale or group of scales was capable of providing a robust estimate of criminal thinking. The authors subsequently developed two new scales; the Current Criminal Thinking scale and the Historical Criminal thinking scale. The Current Criminal Thinking scale measures current criminal attitudes and behaviors and the Historical Criminal Thinking scale measures past criminal attitudes and behaviors. The Current and Historical Criminal Thinking scales are comprised of elements from the eight thinking style scales and include 13 and 10 items respectively. The Current Criminal Thinking scale purports to quickly reveal the extent to



which the subject is currently maintaining criminal thinking patterns, which can be used as a general evaluation tool as well as a predictor of future behavior. Conversely the Historical scale reveals the extent to which the subject has held these beliefs in the past.

One other instrument recently developed and designed to assess responsibility and the process of blame is the Criminal Attribution Inventory (CRAI) (Kroner & Mills, 2002). The CRAI was developed to provide measures of criminal blame as well as measure individual progress and responsivity to treatment, to evaluate a particular treatment program, and to assist in evaluating an individual's need for and amenability to treatment. Theoretically, the CRAI evaluates attributions of blame (internal vs. external) and responsibility, and "the intent, desire, or motive of the person who is perceived to have caused the event" (p. 20). Attributions of blame and responsibility assist criminal justice personnel in determining sentencing, making release decisions, predicting the extent to which treatment is advisable, and predicting individual offender's dangerousness. It is believed that those who hold external attributions of blame are more treatable as they see the particular situation as a determinant of behavior while those who hold more to internal attributions see the behavior as personal trait and are therefore less likely to change (Rhodewalt & Comer, 1981). The CRAI is comprised of six scales that measure internal, external, and random blame. Instructions are provided for scoring and tables are provided for converting raw scores to t-scores. The internal blame domain is measured on two scales: (a) Psychopathology, indicating blaming crime on mental illness, and (b) Personal, which places blame on personal factors such as personality and lifestyle. The external blame domain consists of three scales: (c) Victim, blaming the victim, (d) Alcohol, blames crime on alcohol, and (e) Societal, the participant blames

crime on society and its values. The sixth scale is the Random scale, in which blame is attributed to random/chance events.

#### Additional Research Issues

While the correctional systems within the United States, including Federal and State, have implemented many programs and have genuine good intentions with respect to rehabilitating offenders, good intentions are not enough. Potential problems arise when treatment/programming is implemented without sound knowledge regarding the utility, efficacy, and perhaps without considering that such treatment does not do harm. As Petersilia (1991) states, "too much of current corrections practice is based upon untested assumptions, the validity of which rests on tradition or common sense, and not on proven effectiveness" (p. 24). Additionally, providing meaningful and effective evaluations of any of the types of treatment programming is generally beset with problems (Kratcoski, 1994). Some problems associated with conducting a meaningful evaluation are: (a) it is often difficult to establish control groups and withholding treatment to some may be unethical, (b) it is often very difficult to incorporate a random placement of treatment and controls due to logistical problems (e.g., participants being transferred between institutions), and (c) the evaluation is often conducted by those who have a vested interest in the outcome, resulting in the potential for bias by the evaluators.

In 1996 Congress required the Attorney General to comprehensively evaluate the effectiveness of over \$3 billion provided annually by the Federal Government in grants to assist state and local law enforcement in preventing crime. In turn, the National Institute of Justice commissioned an independent review of the relevant scientific literature. The primary recommendation of the evaluation, conducted by the University of Maryland,

Department of Criminology and Criminal Justice, in brief, states that methods of preventing crime are not well developed and tested (Office of Justice Programs, 1996). In addition, "a much larger part of the national crime prevention portfolio must be invested in rigorous testing of innovative programs, in order to identify the active ingredients of locally successful programs" (p. v). One secondary conclusion reported by the authors is that the number and strength of available evaluations is insufficient and that congressional restructuring of the Department of Justice programs is needed so that adequate scientific controls for testing of program effectiveness are provided. It should be mentioned, however, that the conclusions are not only in reference to treatment of offenders, but also to offender behavior as it relates to families, schools, labor markets, and policing.

The authors also concluded that effective correctional treatment programs should follow basic principles (e.g., careful design; they appropriately address the problem, etc). In addition, in order to effectively analyze past program outcome research, a scale of scientific rigor or strength was developed to classify the studies. All studies were given a score ranging from one to five, five being the most scientifically rigorous. Each study is awarded a score beginning with the first of the following criteria and sequentially receiving a higher score as each criterion is met. The criteria for each score are: (1) A score of 1 is awarded if there is a correlation between a program and a measure of crime or crime risk factors. (2) A temporal sequence between the crime or risk outcome observed, or a comparison group without demonstrated comparability. (3) A comparison between two or more groups, one with and one without the program. (4) Comparison between two or more units, with and without the program with only minor differences



between groups. (5) Finally, a score of 5 is awarded if there is random assignment of comparable groups to program and control. No studies were found in the literature by the above author or for the current study that evaluate correctional treatment within a prison using strict random assignment to treatment and control groups.

In 1998, the British government began what it termed its Crime Reduction Strategy to identify, develop, and assess effective programs for offenders (McGuire & Hatcher, 2001). A specific part of the initiative was focused on defining programs, via evaluative research, that reduce recidivism of offenders. Ultimately, they envision awarding accredited status to programs that meet specific criteria that is reported to be effective.

#### Facilitator Effects

Consideration of therapist or facilitator skills in any outcome study is also vital (Wampold, 2001). One must be able to conclude that the specific ingredients of the treatment, not confounding variables, are what are affecting treatment outcome. Although cognitive restructuring programs designed to facilitate change in criminal thinking are not usually considered to be therapy or therapeutic in nature (facilitators of such programs are often teachers, or even officers, and some manuals indicate that the program was developed for such individuals to administer), facilitating wholesale cognitive and behavioral changes is different from teaching math or facilitating the memorization of text. Group participants are being challenged regarding past and current thoughts and behavior, which may be criminal in nature. Additionally, group participants must accept responsibility for their behavior/crime, which may require facilitator skills that go beyond those needed to simply teach.



In a meta-analysis of treatment outcome studies, Ahn and Wampold (2001) reported that the common factors of each successful outcome study accounted for change from pre to posttest and not necessarily the specific ingredients of each of the various treatments. The common factors they referred to included the healing context of the treatment, the working alliance between providers and receivers of treatment, the belief in the need for treatment, and the treatment program itself. They also suggested that more emphasis be placed on successful therapists as opposed to successful programs when referring clients. The same may be said for those delivering cognitive change programs for criminal thinking and behavior—some group facilitators may be better than others at affecting change. Consideration of facilitator differences in those providing the same treatment program would assist in determining whether or not the program is strictly the instrument of change and/or whether facilitator differences are a mediating factor.

#### Intellectual Functioning

As previously mentioned, a cognitive change program designed to remediate criminal thinking and behavior likely requires certain common factors to be effective, however a certain level of intellectual functioning may be required to learn or comprehend the concepts. An evaluation of the literature revealed no examples of studies evaluating cognitive change programs for criminal thinking/behavior in which some type of intellectual functioning assessment was used as an independent variable. Interestingly, Gottshalk, Davidson II, Mayer, & Gensheimer (1996) reported that since the 1940s, literature consistently suggested that the average offender IQ is at about 91-93, but when one considers that the established mean of 100 included offenders who brought down the population mean, it is more likely to be closer to 90. Additionally, Walsh (2002)

suggested that “differential IQ predicts differential adult SES, and if the lack of success leads to a mode of adaptation that includes criminal activity, IQ must be a predictor of criminal behavior” (p. 353).

Some of those who have developed programs of cognitive change for criminal thinking/behavior purport it not to be therapy, but “Instead, we teach offenders a set of well-defined and specific skills” (Bush & Bilodeau, 1993), p. 1-2). Teaching skills, techniques, and examining cognition by definition would require the participant grasp concepts, apply them and/or to learn them—similar to an academic setting. One might suggest that those who can function higher intellectually, would benefit more or grasp more of the concepts. Additionally, since IQ tests are excellent predictors of academic achievement (Groth-Marnat, 1999), a test of IQ would serve as a valid independent variable to indicate whether or not those with higher or lower IQs benefit or learn more.

### Summary

At this point, much work has been done to understand common thought processes associated with criminal behavior. Additionally, programs to remediate such thought processes have been developed and are being used in correctional settings although the extent to which they are effective is not typically known. While researchers have attempted to examine programming to assess their value, it appears more studies and other approaches are warranted. For example, several types of outcome measures are available as tools to assess efficacy—some of which are new—and using other or more dependent variables would serve to better understand effectiveness.

### Purpose

The purpose of the present study was to evaluate the effectiveness of a treatment program for criminal thinking that incorporated a well known treatment protocol by using new evaluative measures and a more stringently scientific methodology.

### Hypotheses

Four hypotheses were tested based on the review of the literature. They are as follows:

#### *Hypothesis 1*

There would be significant differences found between treatment and control participants after treatment revealed by mean differences (using a MANOVA analysis) on the PICTS, Current Criminal Thinking Scale and the CRAI attributions of blame scales. Walters et al. (2002) has shown that the PICTS, Current Criminal Thinking scale is a robust measure of change for participants involved in treatment to change criminal thinking, is not dependent on spurious factors, and is sensitive to assisted change (only reveals significant change on treatment participants who show signs of commitment to programming).

#### *Hypothesis 2*

There would be a positive relationship between criminality as measured by the LSI-R (reviewed below) and the extent to which participants' criminal thinking changes as measured on the PICTS, Current Criminal Thinking scale. Researchers suggest that those who are more criminal tend to achieve greater results from cognitive/behavioral programming designed to change criminal thinking/behavior (Andrews et al., 1990;

Gendreau & Ross, 1987). A Pearson Product Moment Correlational analysis was used to test the relationship.

#### *Hypothesis 3*

There would be a positive relationship between pretest scores on the CRAI external blame scales (Victim, Alcohol, and Societal) and change in scores on the PICTS, Current Criminal Thinking scale. Researchers suggest that those who tend to engage in more external attributions of blame are more amenable to change (Kroner & Mills, 2002). A Pearson Product Moment Correlational analysis was conducted to assess relationship significance.

#### *Hypothesis 4*

It was hypothesized that Cognitive ability, as measured by the Shipley Institute of Living scale, would have a positive relationship with the amount of change as measured by the PICTS, Current Criminal Thinking scale using a Pearson Product Moment Correlational analysis. First, change scores would be computed for the treatment group on the PICTS, Current Criminal Thinking scale. Next, a Pearson Product Moment Correlational analysis would be conducted to reveal whether a significant relationship existed.



## CHAPTER III

### METHOD

#### Participants

Approximately 150 men were contacted and invited to participate in the study. Those 150 men initially contacted were divided into two equal groups, Treatment and Control. The Treatment participants would be offered inclusion to the Options cognitive change program and the Control participants would not. Only participants expected to be incarcerated for at least the following 12 months were included in the sample. It was estimated that providing treatment for all treatment participants would require less than six months time. Therefore, 12 months was chosen so that those control participants who were not invited into the treatment program would have the opportunity to participate in the Options program, should they so desire, after the study was completed. The invitation to participate was made via a letter sent to each participant by the cognitive program director, who assisted with the study. Initially, only 38 individuals agreed to participate in the study and so a second recruitment meeting was scheduled using the same procedure. Eventually, 80 individuals agreed to participate with five leaving the study before posttest. Of the five who did not remain in the study, two were released from the institution and three were returned to the original prison in which they were incarcerated, outside of the state. The final distribution equaled 29 in the treatment group and 46 in the control group. It is likely that because the control group participants were required only

to complete questionnaires on two different occasions, as opposed to requiring months of cognitive classes for the Treatment group, more of those people agreed to participate. Using Buchner, Erdfelder, and Faul's (1997) approach to analyze power for the present study main hypothesis (setting  $\alpha = .05$  with a small effect size of .10) revealed that 80 participants would be needed to achieve a power level of .80.

Descriptive statistical analyses were conducted for each group with the results provided in Table 1.

Table 1. Means, Standard Deviations, and T-test Results for each Group.

Variable	Group	Mean	Standard Deviation	<i>t</i>
Age	Treatment	34.21	10.22	.47
	Control	35.43	11.38	
Education	Treatment	12.31	1.14	.80
	Control	12.61	1.81	
Sentence Length	Treatment	14.02	10.51	1.07
	Control	17.26	14.06	

The participants ranged in age from 19 to 74. The mean age for all participants was 34.96 years with a standard deviation of 10.89. No statistically significant difference (using a between samples t-test) was found between treatment and control groups for age,  $t(73) = .47, p = .64$ . The participants ranged from 7 years to 18 years of education. The mean years for education was 12.49 with a standard deviation of 1.58 (those who reported obtaining a GED were given a "12" for years of education). No statistically

significant difference (using a between samples t-test) was found between treatment and control groups for education,  $t(73) = .79, p = .43$ . The range in years for sentence length was from 2.5 years to 69 years (for three participants a life sentence was reported; those participants were given a sentence length of 30 years). The mean sentence length was 16 years with a standard deviation of 12.83. No significant difference was found between treatment and control groups for length of sentence,  $t(73) = 1.07, p = .29$ .

Although confining offense, race, and marital status were not included in any analyses they may be of interest and are provided below. Additionally, because some of the groupings are small, comparisons between groups were not conducted. The distribution for confining offenses was as follows. Of the 75 participants, 8 (10.7%) were confined on assault charges, 1 for attempted murder (1.3%), 18 for drug related violations (24%), 18 for gross sexual imposition (24%), 13 for murder (17.3%), 3 for negligent homicide (4%), 6 for parole violations (8%), 1 for reckless endangerment (1.3%), and 7 for robbery (9.3%). The distribution for race was 4 African Americans (5.3%), 54 Caucasians (72%), 3 Mexican Americans (4%), and 13 Native Americans (17.3%). The distribution for marital status was 16 divorced (21.3%), 1 engaged (1.3%), 9 married (12%), and 45 single (60%).

### Instruments

Two paper and pencil measures of criminal thinking were used in the study; the Psychological Inventory of Criminal Thinking Styles, Version 4.0 (PICTS) and the Criminal Attribution Inventory (CRAI). To measure criminality, the Level of Service Inventory-Revised (LSI-R) was used. Finally, to measure cognitive functioning, the Shipley Institute of Living (Shipley) scale was used.



*Psychological Inventory of Criminal Thinking Styles, Version 4.0* (PICTS: V4.0; Walters, 2001). The PICTS: 4.0 is an 80-item self-report measure designed to assess cognitive patterns believed to support and maintain a criminal lifestyle (Appendix A). The first version of the PICTS was developed in 1989 and was then revised in 1990 along with the inclusion of two validity scales, thereby increasing the items from 32 to 40 (four items representing each scale). In 1992 the third edition was issued and the number of items for each scale was doubled from four to eight. Nearly all of the research on the PICTS was conducted on Version 3.0; however, results regarding the validity scales were disappointing (Walters, 1995). The validity scales were revised in 2001 with acceptable results (Walters, 2001) owing to the latest version, 4.0. The validity scales consist of the Confusion and Defensiveness scales. The Confusion scale is designed to identify a fake bad response set as well as reading/language difficulties, or haphazard responding. The Defensiveness scale is intended to reveal a fake good response style. Additionally, if five or more items have been omitted, the results are considered invalid. A sixth grade or higher reading level is also required to register a valid protocol.

The PICTS: V4.0 offers T-scores on the two validity scales, two content scales, eight thinking style scales, four factor scales, and one special scale, the Fear of Change scale (Appendix B). Cronbach's alpha coefficients, measuring internal consistency for all scales range from .55 to .88 with mean inter-item correlations ranging between .13 and .39, suggesting moderate to moderately high internal consistency. Test-retest stability coefficients on all scales exceed .73 after two weeks and .57 after 12 weeks with one exception (Defensiveness scale). Concurrent criterion-related validity analyses reveal several PICTS scales correlating modestly to moderately with indices of past criminality



(prior arrests, prior commitments, age at first arrest, and age at first commitment). In addition, the PICTS is moderately correlated with two frequently used measures of criminal/antisocial behavior—the Lifestyle Criminality Screening Form (Walters, 1998; Walters, White, & Denney, 1991) and the Psychopathy Checklist-Revised (Hare, 1991). Intercorrelations used to assess construct validity revealed overall correlations in the moderately high range with average correlations of slightly more than .50.

A more recent study evaluating the utility of the PICTS revealed that the Current Criminal Thinking index scale was sensitive to and able to detect change resulting from treatment (Walters et al., 2002). Additionally, another recent study showed that the PICTS, Current Criminal Thinking scale correlated with institutional incident reports (Walters, 2002). Finally, a recent study evaluating the psychometrics of the Current Criminal Thinking scale revealed a coefficient alpha of .88 with inter-item correlations between .25 and .53.

*Criminal Attribution Inventory (CRAI)* (Kroner & Mills, 2002). Because the concept of accepting responsibility and being accountable for one's behavior is key to positive treatment effects, the CRAI has been included to provide a more robust evaluative measure. It is also believed that criminal blame may be a central tenet to criminal and antisocial behavior (Samenow, 1984). Additionally, because some may believe that prisons are actual correctional facilities (criminals who are incarcerated would at least accept guilt), the CRAI is also included. The CRAI is a self-report inventory measuring three domains of criminal blame: internal, external, and random. The CRAI was specifically designed to be used in the applications of assessment of criminal blame, treatment changes, program evaluation, and to be used as an adjunct

predictor of antisocial behavior. The CRAI consists of 60 questions to which the respondent indicates “agree” or “disagree” (Appendix C). Results are provided on six scales including: Psychopathology and Personal (which assess internal blame); Victim, Alcohol, and Societal (external blame); and the Random scale for Random blame. All raw scores are converted to a standard T-score.

Coefficient alphas and test-retest reliabilities after one month range from .55 to .84 and from .50 to .74 respectively. Instructions for completion of the CRAI ask the participant to define crime to be “what YOU know the average crime to be.” In doing so the items become descriptive rather than evaluative in nature thus reducing socially desirable responding and contributing to the validity of the results. A fifth grade or higher reading level is required to complete the CRAI. Correlational analyses were computed between the CRAI and the Blame Attribution Inventory (BAI) (Gudjonsson & Singh, 1989) revealing significant correlations on five of the CRAI scales (excluding Random) with the matching BAI scales ( $r$  ranges from .31 to .48). Discriminant validity correlations were computed for age and education with no significant results.

*Level of Service Inventory-Revised (LSI-R)* (Andrews & Bonta, 2000). The LSI-R assesses many of the empirically validated risk factors used to predict criminal behavior. These risk factors include antisocial attitudes, antisocial associates, antisocial personality, history of antisocial behavior, and problems at home, school, work, and leisure. The LSI-R is composed of 54 items that an administrator completes based on a personal interview with the examinee and based on the individual’s records (criminal records and other pertinent institutional records). A total score and an equivalent percentile rank score are provided along with 10 subcomponent scores.

Research for the LSI-R began approximately 15 years ago and continues. Coefficient alphas representing internal consistency for eight separate studies ranged from .64 to .90. Analyses were conducted to assess construct validity on 12 related domains with correlations ranging from .27 to .66. Finally, the LSI-R has been shown to have statistically significant relationships with parole outcome, success in halfway houses, and institutional maladjustment.

*Shipley Institute of Living Scale (Shipley).* The Shipley is a brief screening instrument for estimating current intellectual functioning. First copyrighted in 1940 and normed on 1,046 students from 4<sup>th</sup> grade to college, it is a well established test to estimate adult intellectual abilities (Matthews, Lassiter, & Habedank, 2001). The Shipley has been found to correlate highly (.85) with the Wechsler Adult Intelligent Scale-Revised (Zachary, Crumpton, & Spiegel, 1985).

#### Statistical Analyses

A multiple analysis of covariance (MANCOVA) was used to determine the overall difference in means after treatment between groups on the PICTS, Current Criminal Thinking scale and the CRAI attributions of blame scales (H1). Follow up analysis of variance for each scale revealed the specific areas (scales) in which statistically significant change occurred. A bivariate correlation was conducted to reveal the relationship between criminality using the LSI-R and change using the PICTS, Current Criminal Thinking scale (H2). A series of bivariate correlations were conducted to reveal the relationship between the PICTS, Current Criminal Thinking scale change scores and the CRAI, external blame scales (H3). A bivariate correlation was conducted



to reveal the relationship between cognitive ability and change scores on the PICTS, Current Criminal Thinking scale.

### Procedures

To conduct this study, contact was made and a subsequent brief proposal of the study to the warden overseeing the North Dakota Department of Corrections and Rehabilitation (NDDOCR) facilities along with other NDDOCR officials relevant to the study. Subsequent approval was given by NDDOCR officials. Next, approval from the Institutional Review Board of the University of North Dakota and the Institutional Review Board of the North Dakota Department of Health and Human Services was obtained.

Approximately 250 inmates (virtually all available inmates at that time) from the NDDOCR were chosen as the initial participant pool. From that pool, 150 names were identified as appropriate for the study (e.g., were not expected to be released within 12 months, had not previously been in the treatment program, were characteristically appropriate). The 150 names were then randomly placed, equally into treatment and control groups (75 in each). The potential participants were then notified via a letter sent to them, that they would have the opportunity to participate in the study and invited to meet at a specified date and time. Of the initial 150, approximately 90 attended two separate recruitment meetings.

The potential treatment participants were informed that they were being offered the opportunity to participate in the Options: A Cognitive Change Program used by the NDDOCR. They were also informed that participation in the program is not mandatory and that their decision, whether to participate or not, would have no consequences



regarding their incarceration or status at the institution. They were informed that the cognitive change program is an approximately six-month, twice per week class designed to reveal habits of thinking that have been shown to lead to criminal behavior and in turn teach them to change those thinking habits to reflect healthier thought processes. The participants were also informed that they would be asked to complete two questionnaires measuring criminal thinking patterns prior to beginning the program and again six months later as well as signing an initial consent form (see Appendix D). Participants were also informed that completing the study entitled them to have their name entered in a drawing for a color television (one each for treatment and control groups), conducted after completion. All those declining to participate in the program were dismissed and those who agreed were provided the consent forms and administered the questionnaires. Those who agreed began participation in the treatment program shortly thereafter.

Control group participants were informed that they were being offered the opportunity to participate in a study evaluating the effectiveness of a cognitive treatment program in which they would serve as controls. They were also informed that they would have the opportunity, should they desire, to participate in the same program after the six-month study was completed. The potential participants were informed that their decision to participate or not would have no consequences regarding their incarceration or status at the facility. In addition, the potential participants were notified that upon completion of the study, their names would be entered into a drawing for a television. The procedure, completing the two questionnaires (requiring approximately one hour) was explained and those declining to participate were excused while those who accepted were asked to sign the initial consent form and complete the questionnaires. After approximately nine

months, the participants completed both questionnaires again, the drawing was held, and the prizes awarded.

It should be noted that seven group facilitators (employed by the NDDOCR) were involved in the delivery of the treatment. The facilitators have past experience facilitating groups under the NDDOCR cognitive program and have had prior training (completed a 36-hour training program) specific to Options.

## CHAPTER IV

### RESULTS

Presented below are the results of the hypotheses stated in chapter II. Included are: The results of Hypothesis 1—that differences would be found on the various PICTS and CRAI scales between Treatment and Control groups at posttest. Hypothesis 2—that a positive relationship would be realized between change as measured on the PICTS, Current Criminal Thinking scale and criminality as measured by the LSI-R. Hypothesis 3—that a significant relationship would be realized between external attributions of blame and criminal thinking (hypothesis 3). And, Hypothesis 4—that cognitive ability would be a mediating factor in the amount of change in criminal thinking.

Additionally, post hoc analyses are presented to include the following: Correlations were conducted between various variables used in the present study to realize significant relationships. An evaluation was done to indicate whether confining offense was a mediating factor with results measured by the PICTS, Current Criminal Thinking scale. An evaluation was done to assess significance when comparing the amount of change, as measured by the PICTS, Current Criminal Thinking scale with the various group facilitators. And finally, the results of within group analyses of change on the seven PICTS and CRAI scales used in the study are presented.

### Data Analyses

Data analyses were conducted using the SPSS software package for Windows version 10.0. Descriptive analyses were conducted for the purpose of providing a description of the participants involved in the study and to assist in assessing group differences.

### Preliminary Analyses

All data for the Shipley Institute of Living scale (Shipley) and Level of Service Inventory-Revised (LSI-R) were obtained from the North Dakota Department of Corrections and Rehabilitation (NDDOCR). One score for the Shipley and seven scores for the LSI-R were missing without means for retrieval. The NDDOCR reported that the performance of the participant whose Shipley score was missing, was so low that a score could not be determined. The lowest score for all participants (excluding the one missing) was 81. It was decided that a score of 78 would be given for that participant so as not to lose the known low value of the score and so that it would fall just within three standard deviations from the group mean (the participant was in the control group).

Due to the limited number of participants involved in the study, it was determined that excluding the LSI-R values for the missing data would not be the best alternative. Instead the group mean was inserted for the missing scores. The three scores inserted for the treatment group were 29 (mean = 29.27) and the four scores inserted for the control group were 30 (mean = 30.48).

Preliminary analyses were conducted to check whether the distribution of scores, for each variable, did not contain outliers and that treatment and control groups did not differ on the dependent variables at pretest. The presence of outliers can affect statistical



analyses, particularly when using multivariate procedures (Stevens, 1996). Stevens suggested that an absolute z-score greater than three for a relatively small sample be considered an outlier. No individual scores in either group on the nine variables used in the study were greater than three thus indicating no outliers. Additionally, to assess normality on each dependent variable for each group, analyses of skewness and kurtosis were conducted. George and Mallery (2001) suggested that skewness and kurtosis scores of plus or minus two is generally acceptable for most psychometric purposes. Skewness and kurtosis results for both groups on all variables were less than 1.45, excluding the kurtosis value for the Shipley IQ scores for the control group. The Shipley kurtosis value for the control group was 3.65, indicating a departure from normality such that many more scores fell within the midrange than would be seen in a normal distribution.

A series of independent sample t-tests comparing Treatment to Control groups at pretest were conducted to assess initial differences on the tested variables (PICTS, Current; CRAI, Psychopathology, Personal, Victim, Alcohol, Societal, Random) and on the variables used to assess for correlation with treatment outcome (Shipley and the LSI-R). A significant difference was found for the CRAI, Personal scale,  $t(73) = -2.02, p < .05$ . The mean for the treatment group was significantly higher compared to the control group indicating that the treatment group has a greater tendency to attribute criminal behavior to personal factors, such as personality and lifestyle. No significant differences were found for all remaining variables. A list of the variables with means, standard deviations, and t-test results are presented in Table 2.

Table 2. Independent Samples Means, Standard Deviations, and T-tests of Significance for all Pretest Variables.

Variable	Group	Mean	SD	<i>t</i>	Significance
PICTS SCALE					
Current	Treatment	55.48	10.94	.50	.62
	Control	54.24	10.26		
CRAI SCALES					
Psych/pathol	Treatment	52.17	9.73	.75	.46
	Control	50.30	10.96		
Personal	Treatment	53.21	9.72	2.02*	.05
	Control	47.78	12.20		
Victim	Treatment	52.24	11.41	.94	.34
	Control	49.63	11.45		
Alcohol	Treatment	48.03	10.33	1.74	.09
	Control	43.89	9.90		
Societal	Treatment	53.45	13.19	1.33	.19
	Control	48.70	11.10		
Random	Treatment	54.55	11.78	.48	.63
	Control	53.33	10.10		
Shipley	Treatment	106.28	11.11	-.76	.45
	Control	108.28	11.21		
LSI-R	Treatment	29.24	5.49	-.74	.46
	Control	30.43	7.47		

\* $p < .05$

It should be noted that all of the listed means for all variables excluding the Shipley and LSI-R are T-scores (mean = 50, standard deviation = 10). It should also be noted that for the PICTS and CRAI scales, higher scores indicate more general criminal thinking and more attributions of blame respectively. Mean scores for the Shipley are IQ estimates with the same psychometric properties as the Wechsler scales from which they were derived (M = 100, SD = 15). The mean LSI-R scores are raw scores. Percentile ranks for 29 (Treatment) and 30 (Control) are 63.4 and 68.4 respectively. Both scores fall into the Moderate Risk Needs category with approximately a 48.1 percent chance of recidivism.

### The First Hypothesis

The first hypothesis of the study was that treatment participants, at posttest, would have significantly lower scores on the PICTS, Current Criminal Thinking scale and the six CRAI scales when compared to the control participants. A one-way MANCOVA was conducted to determine the effect of treatment versus control on six of the seven dependent variables with the CRAI, Personal scale inserted as a covariate. The Personal scale was inserted as a covariate and thus held constant because the treatment versus control groups were found to be significantly different on that variable at pretest. The one-way MANCOVA was chosen to assess mean differences across each of the six dependent variables to reveal treatment effects. Significance was determined by setting alpha at .05, with a medium effect size. Because two groups formed the independent variables, Hotelling's Trace was used to evaluate significance. No significant difference was found between the treatment and control groups at posttest on the dependent measures, Hotelling's  $T = .06$ ,  $F(6, 67) = .63$ ,  $p = .71$ .

Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the MANCOVA in order to determine significant change for each individual scale. Using the Bonferroni method, each ANOVA was tested at the .01 level ( $.05 / 6 = .008$ ). Table 3 lists the results for the follow-up ANOVA's, none were found to be significant.

Table 3. Results for Follow-up ANOVA's for each Variable.

Variable	F	Significance
PICTS		
Current	.30	.59
CRAI		
Psycho/pathol	.63	.43
Victim	.48	.49
Alcohol	1.27	.26
Societal	.69	.41
Random	.13	.72

Another approach used to evaluate the effects of treatment is comparing difference scores (Mellenbergh, 1999). Rather than simply comparing group means at posttest, the posttest scores were subtracted from the pretest scores for each individual in each group to provide a difference score. Listed in Table 4 are mean Treatment and Control group difference scores for six variables used in the analysis.



Table 4. Mean Differences Scores for Treatment and Control Groups for all Variables.

Variable	Group	Mean Difference Score
PICTS		
Current	Treatment	2.52
	Control	1.83
CRAI		
Psych/pathol	Treatment	0.10
	Control	1.24
Victim	Treatment	2.66
	Control	-2.54
Alcohol	Treatment	1.38
	Control	-0.33
Societal	Treatment	4.80
	Control	-1.72
Random	Treatment	2.28
	Control	-0.67

*Note.* Negative numbers indicate an increase in the particular variable from pre to posttest.

Using difference scores incorporates a within group design and serves to co-vary mean differences between groups at pretest. The group mean difference scores were then analyzed. Prior to conducting a MANCOVA on difference scores, the data were screened for outliers. For the treatment group, one outlier change score was identified on the

PICTS, Current Criminal Thinking scale (a difference score greater than three standard deviations from the group mean). On all other variables for both groups, no outliers were found. One option, as suggested by Maruel and Delany (1990) and used here, is to change the outlier so that it remains on the extreme end of the distribution, but not as extreme. In this case, the low outlier was changed to be one score lower than the next lowest score in the distribution, but no longer low enough to be considered an outlier. The one-way MANCOVA was again used in the analysis with the CRAI, Personal scale inserted as the covariate. The results revealed no significant difference between treatment and control groups, Hotelling's  $T = .147$ ,  $F(1,73) = 1.65$ ,  $p = .15$ .

Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the MANCOVA. Again, using the Bonferroni method, each ANOVA was tested at the .01 level. The ANOVA's were not significant at the .01 level, however two variables were significant in the hypothesized direction at the .05 level. The ANOVA on the difference scores for the CRAI, Victim scale was,  $F(1,72) = 4.33$ ,  $p = .04$  indicating that the treatment participants blame criminal behavior less on the victim after treatment compared to before. The ANOVA on the difference scores for the CRAI, Societal scale was,  $F(1,72) = 5.98$ ,  $p = .02$  indicating that treatment participants blame criminal behavior less on society after treatment compared to before. The results for all variables are presented in Table 5.

#### The Second Hypothesis

The second hypothesis was that there would be a positive relationship between criminality as measured by the LSI-R (administered by the NDDOCR, typically when admitted to the institution) and the extent to which each treatment participant's criminal

thinking changed as measured on the PICTS, Current Criminal Thinking scale. In other words, those with higher LSI-R scores would change more or show a greater difference score. First, difference scores on the PICTS, Current Criminal Thinking scale were computed on the treatment group only. Next a Pearson Product Moment Correlational analysis was conducted to reveal linear relationship between the two variables. The results of the analysis indicated no significant relationship between the two variables,  $r = -.06, p = .38$ .

Table 5. Follow-up ANOVA Results for all Variables.

Variable	F	Significance
RICTS		
Current	0.20	.65
CRAI		
Psycho/pathol	0.31	.58
Victim	4.33	.04
Alcohol	0.51	.48
Societal	5.98	.02

#### The Third Hypothesis

The third hypothesis was that a positive relationship between pretest scores on the CRAI external blame scales (Victim, Alcohol, and Societal) and change in scores on the PICTS, Current Criminal Thinking scale would be found for the treatment group. In other words, those who initially hold a more external blame schema, would change more than

those who do not. A Pearson Product Moment Correlational analysis was used to determine linear relationship. Difference scores were computed and used for the Current Criminal Thinking scale. Using the Bonferroni method to control for Type I error across the three correlations, an  $\alpha$  level of less than .02 ( $.05 / 3 = .016$ ) was required for significance. The results revealed no significant relationships between the Current Criminal Thinking scale and the three external blame scales. The results are provided in Table 6.

Table 6. Pearson Product Moment Correlations for Hypothesis Three (N = 29).

	Victim	Alcohol	Societal
Current Criminal	-.05	-.19	-.11
Victim Blame		.31	.48*
Alcohol Blame			.28

\* $p < .01$

It should be noted that a significant, positive correlation between the Victim and Societal Blame scales was revealed. Those who tended to blame the victim also tended to blame society for criminal behavior.

#### The Fourth Hypothesis

For the fourth hypothesis it was predicted that cognitive ability as measured by the Shipley, would have a positive relationship with change on the PICTS, Current Criminal Thinking scale. A Pearson Product Moment correlational analysis was used to determine linear relationship. Difference scores were computed for the Current Criminal



thinking scale and  $\alpha$  was set at .05. Not only did the results of the correlational analysis reveal no significant relationship between the two variables,  $r = -.22, p = .13$ , the direction of the correlation, albeit nonsignificant, was in the opposite direction as hypothesized.

## Post Hoc Analyses

### *Correlations*

A series of correlational analyses were conducted to determine the extent and direction to which certain variables were related for the treatment group. The LSI-R scores, Shipley scores, and Age were correlated with change scores for the seven variables used in the above analyses. A negative relationship was revealed between Random Change scores and LSI-R scores  $r = -.425, p < .05$  (because the correlation matrix included a very high number of variables,  $3 \times 7$  and because the purpose of the post hoc analyses was exploratory, the results did not include a Bonferroni correction). All other results were not significant.

### *Confining Offense Effects*

An attempt was made to evaluate whether or not treatment has a greater or lesser effect based on confining offense. For the treatment group, each participant was placed in one of four groups based on his confining offense. The four confining offense groups were organized by this researcher as follows: (a) violent crimes (murder, assault, negligent homicide,  $n = 9$ ), (b) drug related crimes ( $n = 10$ ), (c) crimes including robbery or theft ( $n = 4$ ), (d) and sex related crimes (most being Gross Sexual Imposition,  $n = 6$ ). An Analysis Of Variance (ANOVA) was conducted using the four confining offense

groups as factors and the Current Criminal Thinking change scores as the dependent variable. The results revealed no differences  $F(3, 25) = .72, p = .55$ .

#### *Facilitator Effects*

An attempt was also made to evaluate whether or not treatment was more or less effective based on group facilitators. There were a total of seven facilitators providing treatment for the 29 participants. Table seven provides the distribution of the number of participants receiving treatment from each facilitator. Facilitators A and B constituted two separate groups and because facilitators C through G provided treatment to three or fewer participants, they were combined to form a third group. An ANOVA, using the three facilitator groups as factors and the Current Criminal Thinking change scores as the dependent variable was conducted. The results revealed no significant difference in change scores accounted for by facilitators  $F(2, 26) = .42, p = .66$ .

Table 7. Number of Participants for each Facilitator.

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A	9
B	12
C	3
D	2
E	1
F	1
G	1

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Table 8. Paired Samples Means (Pre and Posttest), and T-tests of Significance for All.

Variables					
Variable	Group	Pretest	Posttest	<i>t</i>	Significance
PICTS					
Current	Treatment	55.48	53.48	-1.18	.25
	Control	54.24	52.41	-2.09	.04
CRAI					
Psych/pathol	Treatment	52.17	52.07	-.06	.95
	Control	50.30	49.07	-.77	.45
Personal	Treatment	53.21	52.00	-.58	.57
	Control	47.78	48.50	.53	.60
Victim	Treatment	52.24	49.59	-1.41	.17
	Control	49.63	52.17	1.61	.12
Alcohol	Treatment	48.03	46.66	-.81	.43
	Control	43.89	44.22	.23	.82
Societal	Treatment	52.45	47.66	-2.30	.03
	Control	48.70	50.41	1.01	.32
Random	Treatment	54.55	52.28	-1.04	.31
	Control	53.30	54.00	.46	.65

*Note.* All mean scores are T scores (mean = 50, standard deviation = 10).

### *Within Group Effects*

Analyses were conducted to test within group differences—were significant differences (significant change in scores) revealed between pre and posttest measures within the two groups (see Table 8). All seven variables were analyzed for each group. Results showed significant differences (at the .05 level) for the treatment group for the CRAI, Societal scale. The results suggest that a significant change was facilitated by treatment on that variable alone. In other words, due to treatment, participants' attributions of societal blame (blaming crime on society and its values) decreased. Results also revealed a significant change for the Control group on the PICTS, Current Criminal Thinking scale. Surprisingly and for reasons that are not readily apparent, the Control group significantly changed (regarding their current criminal attitudes and behavior) over the nine-month period.

Upon further review of Table 8, for all measures the Treatment group mean scores were lower at posttest (although not necessarily statistically significant) indicating that they endorsed fewer criminal-like answers when completing the two measures. For the Control group, a review of Table 8 indicates that participant's endorsed fewer criminal-like answers for the PICTS, Current Criminal Thinking and the CRAI, Psychopathology scales only.

Upon closer review of Table 8, when considering the Current Criminal thinking scale, the Treatment participants mean change from pre to posttest was actually more than the Control group (2 and 1.83 respectively). However, the Control group change was statistically significant while the Treatment group was not. Because there were more participants in the Control group ( $n = 46$ ) than in the Treatment group ( $n = 29$ ) less



change is needed to realize a statistically significant result. Additionally, one Treatment participant (whose change score was adjusted for the H1 analysis above) at pretest had a score of 33 (endorsing very little criminal thinking), but at posttest had a score of 66 (endorsing significant criminal thinking). Neither the pretest or posttest scores are considered outliers when compared to the remaining Treatment group, however the negative change was an outlier as noted above. While one can only speculate, it may be likely that over time or due to treatment, the participant took a more realistic and less defensive approach when completing the questionnaire at posttest. If the participant is excluded from the paired samples t-test for the PICTS, Current Criminal Thinking scale only (his scores on the remaining measures indicated treatment gain excluding the CRAI, Random scale) the posttest mean for the Treatment group becomes 53.04 and the results become significant at the .05 level,  $t(27) = -2.20$ ,  $p = .04$ .

## CHAPTER V

### DISCUSSION

The present study was designed to assess the effectiveness of treatment to reduce criminal thinking for offenders incarcerated at the NDDOCR. In contrast to many past efficacy studies, the current project used a design that incorporated two recently developed paper and pencil measures to assess change in criminal thinking as a result of programming rather than reviewing institutional violations or evaluating recidivism rates. After review of the two measures (prior to beginning the current study), the NDDOCR Treatment Coordinator determined that the measures assessed relevant aspects of their widely used program—Options: A Cognitive Change Program. Unexpectedly, none of the proposed hypotheses were clearly confirmed. That is, no significant differences were found between treatment and control groups at posttest on the PICTS and CRAI variables, a positive relationship between criminality and change in criminal thinking was not realized, external blame was not a factor in change in criminal thinking, and cognitive ability was not a factor in change in criminal thinking. This discussion must then address the obvious question—what accounts for the nonsignificant results? There are manifold possibilities the most salient of which are offered below.

#### The Program

One can conclude that because the hypotheses were not realized, the program, at least as it is utilized at the NDDOCR, is not effective. Based on the statistical results

(follow up ANOVAs) significant change was revealed regarding victim and societal blame on those CRAI scales, but the results are inconclusive and no other differences were revealed. One may conclude, based on the results indicating that the control group changed significantly and in a positive direction on the PICTS, Current Criminal Thinking scale, that the program is redundant. Because the control group showed overall positive change equal to the treatment group, there may be little reason to provide the treatment since it is doing no more than no treatment at all. While no studies were found that assessed change or the validity of the Options program, the Options program is believed to be a comprehensive and widely used approach for cognitive restructuring regarding criminal thinking.

It should be noted that the NDDOCR does not utilize all components of the Options program. The NDDOCR incorporates into the treatment program only the first two of the three phases of Options. NDDOCR officials cite several reasons for not utilizing the complete program each of which will be addressed below. The first reason is that the program is completely voluntary—it would be unethical, indeed unlawful, to require offenders to complete treatment for criminal behavior. As it stands (only Phase I and II), treatment participants are being asked to make a significant commitment in order to complete the program. To complete the first two phases of the treatment, the participant must attend 24 sessions, each an hour and a half long for the first phase and 16 sessions, each two hours long for the second phase. With potential problems associated with participant attitudes, motivation, trust, resentment etc. (addressed further below), completing 40 treatment sessions that require the participant to evaluate and take responsibility for past behavior is no small undertaking.



Another reason for not including Phase III pertains to the difficulty obtaining the necessary manpower needed to provide the treatment, including funding for treatment providers and materials. In fact, there would likely not be enough resources should all incarcerated offenders desire participation in the program. Additionally, the two phases of the Options program that are utilized require approximately a seven-month commitment and many of the sentences for offenders at the NDDOCR are relatively short term and preclude a longer commitment (officials report that extending the treatment beyond seven months would not allow them to serve the majority of the offenders). Finally, it should be noted that Phase III of the Options program concerns applying a plan for change in a real life context. The authors state that optimally, Phase III would take place in the community following incarceration (Bush & Bilodeau, 1993). In many instances offenders are released without further commitment (without parole) and perhaps continuing treatment is beyond the scope of those providing parole services in North Dakota.

Although the entire Options program is not incorporated into the NDDOCR cognitive restructuring program, one might assume that a 40-session, seven-month approach would provide significant results (i.e., that a two-phase program would be sufficient). According to information provided in the Options manual, there exist several "barriers to program effectiveness" (Bush & Bilodeau, 1993, p. 5-1). Bush and Bilodeau reported that due to certain entrenched prison cultures, there are many barriers that serve to hinder effective correctional programming. For example, offenders often do not trust "the system." Offenders often view correctional staff as the enemy or being on the other side. They often harbor resentment of authority and view authority figures as trying to



control their life. Bush and Bilodeau suggest that one of the hardest barriers to break in a prison setting is the offender's image or problems associated with status and reputation. They suggested that "Image defines their power position in the "convict hierarchy" (p. 5-12). In opposition to that image, cognitive restructuring programs require the participant to examine past, negative thinking and behavior, which also introduces an element of vulnerability to the participant. An image of vulnerability does not serve a man incarcerated in a prison well (does not place him high in the hierarchical order). In addition and as reported above, Yochelson and Samenow (1976) note that incarcerated offenders tend to be nondisclosing, take a victim stance (see themselves as the real victim), are self-centered, do not accept responsibility are not trusting of others, and are independent. To the extent that the program is effective in decreasing criminal thinking, the treatment providers at the NDDOCR (or any prison) are faced with a formidable challenge suggesting that easily revealed results may be the exception.

In addition to barriers related to characteristics of offenders, barriers associated with attitudes and behaviors held by staff exist as well. Bush and Bilodeau (1993) make clear that treatment providers may hold punitive attitudes, control attitudes, lack of trust, and the belief that offenders are hopeless. In fact, some believe that a prison setting or providing treatment to combat criminal thinking and behavior may be iatrogenic, that is, do more harm than good or cause the treatment participant to become more criminal-like (Haney & Zimbardo, 1998). It should also be noted that although the Options manual provides a relatively detailed approach to facilitate change, much discretion is left to the group leader. For example, what constitutes acceptable participation or what are the

minimal expectations for graduation from Phase 1 to Phase 2, is to some degree, determined by the group leader.

Certainly some treatment providers are more capable or are more effective than others in providing the necessary didactics, support, instillation of motivation, and other factors necessary to facilitate change in the offender. As mentioned in Chapter II, consideration of treatment provider skill in outcome studies is vital (Wampold, 2001). In the present study, a post hoc analysis of treatment gain (difference scores for the PICTS, Current Criminal Thinking scale) differences between facilitators was insignificant. There is no evidence to suggest that treatment provider effects are a significant factor regarding the results of this study as no particular treatment provider obtained better results than others. Perhaps a difference might have been realized with a larger sample size; however, at this point one can only conclude that all facilitators in this sample were relatively equally effective.

#### Statistics and Design Considerations

Using Buchner, Erdfelder, and Faul's (1997) approach to analyze power for the present study main hypothesis (setting  $\alpha = .05$  with a small effect size of .10) revealed a power level of .77, which is generally considered adequate. However, for all other hypotheses, the power level was much less than was desired. In all cases for the remaining hypotheses, power was .20 or less suggesting that the probability of making an accurate decision to accept or reject the null hypothesis or detecting a significant difference was difficult or unlikely. Buchner, Erdfelder, and Faul's approach to power analysis can be considered liberal when compared to Cohen. An analysis of power using Cohen's (1992) method, suggests a sample size of approximately 393 participants per

group would be needed to achieve a power level of .80. Obtaining a total sample of 786 would make a study of the present kind, with adequate power, a nearly impossible undertaking—at least in consideration of the time constraints associated with a dissertation and the limited population regarding those incarcerated in North Dakota.

Stevens (1996) provides yet another table to estimate power for a two group MANOVA. Using seven as the number of variables, choosing 25 as the group size (the table provides four variables and group sizes to choose from), and choosing a small effect size, the estimated power is only .22. Suffice it to say, power may fluctuate depending on how or who is providing the calculations.

It was originally believed that more members of the target population would volunteer to participate in the study. NDDOCR officials initially believed that more participants would be available, however after filtering through the list of potential participants it was realized that fewer than initially thought would fit the criteria (would remain in custody for at least another year, were appropriate for cognitive treatment, had not already received cognitive treatment, etc.). Additionally, it seemed to become clear to the treatment coordinator after the initial recruitment visit, that the time and logistics involved in maintaining records, obtaining LSI-R and Shipley data, maintaining a treatment schedule, monitoring participant attendance and completion, and the myriad other tasks involved in the study was perhaps a larger undertaking than initially considered. In fact, a follow up visit was warranted by this researcher to personally recruit more participants to the study, especially for the treatment group. Additionally, it was believed by NDDOCR personnel that providing treatment within the time constraints of a dissertation (an estimation of six months was provided) would not be a problem for



many more participants than eventually were involved. However, it took approximately nine months to provide treatment for the 29 treatment participants who were in the study.

Due to the concerns associated with a small sample and potentially low power, additional measures can be undertaken to increase power. Stevens (1996) suggested that when realizing low power (especially with less than 20 participants per group, although both treatment and control groups were larger in this study) four methods of improving power should be considered. The four methods Stevens listed are as follows: (a) use a more lenient  $\alpha$  level such as  $\alpha = .10$  or  $\alpha = .15$ ; (b) use one tailed tests when possible; (c) consider ways to reduce within-group variability; and (d) ensure that there is a strong link between treatment and the dependent measures or that treatment extends over a long enough period of time for it to produce a large effect size.

The main hypothesis of this study that a significant difference would be found between treatment and control groups at posttest on the seven variables listed in Chapter III. The CRAI, Personal variable was held constant because of the group differences realized in the preliminary analyses. If one considers Stevens' suggestions, the results become at least closer to the hypothesis, albeit not significant. Multivariate tests are inherently two-tailed which precludes the second suggestion of using a one-tailed test. Additionally, little can be done, at least at this point, to increase power by working to match the dependent variables to treatment or increasing the duration of treatment (since data collection is complete). However, the  $\alpha$  level could be increased and using difference scores will assist with problems associated with within group variability (when using difference scores, each person serves as his own covariate). Using a difference score method has historically been controversial (chiefly due to questions about the



reliability of a difference score measure), however authors of two recent articles suggest that reliability is not a concern so long as experimental conditions are adhered to and add that using difference scores increases power (May & Hittner, 2003; Mellenbergh, 1999). When these two strategies were applied, the results were significant at the .15 level, Hotelling's  $T = .147$ ,  $F(1, 73) = 1.65$ ,  $p = .15$ . A significant result suggests that the treatment for criminal thinking, facilitated by the NDDOCR to those offenders who agreed to participate in the program, resulted in significant, measurable change in criminal thinking (as measured by the two tools used in this study). However, the reader should be reminded that changing the  $\alpha$  level to .15 increases the risk of making a Type I error—that change in criminal thinking has taken place when it actually has not.

For the second hypothesis, it was predicted that there would be a positive relationship between Current Criminal Thinking change scores and LSI-R scores. A significant relationship was not found. A post hoc power analysis was conducted to assess whether power for the current sample was adequate. Using Buchner et al. (1997) method, which can be considered liberal, it was determined that with the current sample, power would be .50, which is considered low. Again, with low power, finding a significant result is less likely especially when one considers that effect sizes for similar treatment in the literature have been found to be small. The current analysis revealed an  $\alpha$  level of .38. With a larger sample size the results may have been significant or approached significance. Unlike the main hypothesis, incorporating measures to increase power, as suggested by Stevens, would add little to the result.

The same can be said for the remaining hypotheses. None were found to be significant and all analyses are considered to have low power. To increase power,

difference scores were used as well as using one-tailed tests where appropriate, although most results were far from statistical significance. However, for the fourth hypothesis (correlating Shipley scores with change in criminal thinking),  $p = .13$ . Had there been more treatment participants in the study, statistical significance may have been realized. Additionally, recall that the means for the Treatment and Control groups (106.28 and 107.89 respectively) may be considered by some (Platt, 1987) to be high for a prison population. One might conclude that because the participants Shipley scores were high, they would be more teachable or better able to understand the concepts. However, the negative relationship between the two variables suggests that those with lower IQ scores or those with lower intellectual functioning, benefited more from the treatment. The negative relationship is not easily explained, but it may indicate that either those who have a higher IQ are less criminal in their thinking and consequently show less change, or that they are less inclined to accept the principles of the Options program.

In further consideration of the moderate effects of the present study and what might account for small effects, a review of the design may shed some light. In the design of the present study, where treatment is contrasted with control participants, still other factors may account for the results. For example, Losel (2001) stated “untreated control or comparison groups do not spend the time during treatment in a vacuum” (p. 73). Losel further suggested that when treatment and control groups are compared it is unlikely that one will find “a program-versus-nothing dichotomy” (p. 73). In other words, control participant may make positive change on their own or perhaps learn from the treatment participants. Such may be the case in the present study. In fact, conducting a within group t-test on changes in means from pre to posttest revealed a significant change (in a positive

direction indicating a reduction in criminal thinking) on the PICTS, Current Criminal thinking scale for the control group only. With a significant positive change shown in the control group and not the treatment group, obviously finding a significant difference when comparing treatment and control groups becomes much more difficult.

While some suggest that incarceration is by nature iatrogenic (prison may be more harmful than good, (Haney & Zimbardo, 1998; Wright, 1993) that may not always be the case. For example, compared to all other states, North Dakota had the third fewest sentenced prisoners per capita in 2001 (source book). While fewer sentenced prisoners does not necessarily indicate that North Dakota prisoners are less criminal, it may speak to the general criminal nature of residents of the state and that may also speak to the general criminal nature of in-state offenders. It should also be noted that although there is no data to support such claims, the NDDOCR may have a greater emphasis on rehabilitation in general than many or perhaps all other state prisons (T. Schutzel, personal communication 09/01/04). Additionally, Mr. Schutzel reported that the NDDOCR tends to see less institutional violence among offenders. While it may be difficult to compare recidivism rates (depending on how it is defined by those compiling the information) using a three-year follow-up and defining recidivism as the percentage of those who are returned to prison, for those released in 2001 the NDDOCR realized a recidivism rate of only 24.6% (as mention in Chapter I, a recidivism rate of 67.5 was realized for offenders released in 1994). Finally, the mean Shipley score for the two groups was 107.27 potentially indicating significantly higher intellectual functioning for the NDOCCR population compared to other prison populations (Gottshalk et al., 1996). Walsh (2002) suggested that intellectual ability is positively related to “occupational



success and coping strategies” (p. 352) and that IQ is a positive predictor of criminal behavior. With a population that may tend to be less criminal in nature, a prison system that has a more rehabilitative emphasis and potentially having lower recidivism rates for those released, confirming the positive effects of a treatment program to change criminal thinking would be much more difficult compared to other studies.

### Positive Effects

While low power may be a factor regarding not finding significant results, other factors may also play a role. For example, meta analyses indicate that small effect sizes are typical for offender treatment and some studies have shown very small positive effects or have actually shown negative effects if the quality of delivery is poor (McGuire, 2001). McGuire further suggested that personnel must have appropriate training and adequate resources. They must also adhere to their objectives using suitable methods and undertake systematic evaluation of participants’ progress and monitor the outcome of their services. It seems unlikely that correctional institutions are incorporating sound practices to monitor effectiveness, and as Petersilia (1991) reports, too much corrections practice is based on untested assumptions. While NDDOCR personnel reported that some anecdotal efforts to evaluate change in offender behavior have been undertaken, the present study is the first systematic undertaking of any type of outcome evaluation. The purpose of this study was to examine the effectiveness of the cognitive programming provided by the NDDOCR, with officials indicating that more of this type of research should be done in corrections. It is this type of desire to maintain high standards and courageous self-evaluation that will assist to make these types of treatment



effective and to assist in developing and providing adequate means for measuring and identifying positive effects in the future.

Given the small number of participants in the present study and that research of the present kind tends to find small effects, the results should not be considered necessarily insignificant. Once again, when one implements the strategies listed above to overcome low power or small sample size and when one considers that both treatment and control groups made modest positive change in their general criminal thinking, the results seem much more significant and on some variables prove to be positive. Additionally, positive, significant results were found regarding change in CRAI external blame scales—Societal and Victim.

According to the Options manual, “Accountability for their behavior is an essential element of the program” (Bush & Bilodeau, 1993, p. 5-1) and that was realized in the results concerning the two external blame scales for the treatment participants. With regard to the remaining blame scales, it seems unlikely that individuals in general would rationalize their criminal behavior by admitting to personal or psychological shortcomings such as those measured by the CRAI, Personal and Psychopathology scales (e.g., endorsing such items as “People who do crime do so because of their personality traits” and “Criminal behavior is often caused by mental illness”). Such reluctance to acknowledge personal deficits is probably even more common among incarcerated offenders, who tend not to accept traits that might indicate a sign of weakness. It also seems that offenders did not attribute their criminal activity to random chance events (e.g., “Most crimes have no cause, they just happen”).

While the alcohol scale is considered an external blame scale (criminal behavior is attributed to the effects of using alcohol), a significant proportion of offenders did not view alcohol use as a mediating factor in their behavior. One might think that blaming alcohol would be an easy escape from responsibility (many individuals, criminals or otherwise, have blamed alcohol for various negative behaviors); however, one would have had to be under the influence of alcohol at the time of the crime to use such an attribute. Many of the participants may not have been under the influence of alcohol at the time of their offense. Additionally, because attributing negative behavior to the effects of alcohol consumption is so widely used and perhaps even used by the general public, it seems more than likely that the facilitators and the Options protocol would incorporate measures to circumvent such thinking.

The fact that a significant difference was realized (concerning the main hypothesis) at the .15 level, may suggest that the programming to change criminal thinking used by the NDDOCR may indeed be effective. Change in general criminal thinking as measured by the PICTS, Current Criminal Thinking scale and attributions of blame as measured by the CRAI, Victim and Societal blame scales may indicate, at least modestly, that change is taking place and that it is taking place with regard to important and fundamental concepts indicated in the literature. Individuals who have received treatment are less inclined to think in the general way “criminals” are known to think and after treatment are accepting more responsibility for their criminal type behavior. With that, one can only believe that they would be less inclined to commit crimes in the future.

## Validity and Reliability of the Measures

While at least one program facilitator had access to the PICTS and CRAI protocols, it is not believed that they adjusted their treatment approach to fit the specific questions or general index themes. Upon realizing the results of this study, group facilitators might evaluate the protocols to understand a more exact nature of the test items and the relevance to their program. The authors of the Options program manual suggest evaluating effectiveness using a treatment and control group design, but a protocol for doing so is not provided. However, a measure designed to fit the Options criteria and perhaps more specifically those areas deemed especially important by NDDOCR officials would benefit those who are providing the treatment in assessing outcome. Although one official reviewed the protocols and reported that the questions were relevant to Options, a more in depth study of the protocols to understand the exact nature of what is being measured compared to the program that is being provided, might be in order.

Upon review of meta-analyses of outcome studies for adults, Andrews et al. (1990) reviewed institutional violations and recidivism as the outcome measure. None incorporated an evaluative measure such as used in the present study, which is not surprising, considering the relatively novel nature of the approach. Consequently, no information was found in the literature regarding strategies to enhance or improve such an outcome evaluation (e.g., ensure a relationship between treatment and outcome measure, timeliness of evaluation, etc.). However, in light of the fact that positive results were not readily realized in the present study, one must consider the possibility that the program in its present state could be modified to reveal a more identifiable positive



outcome. Again, with that, it is suggested that those personnel involved in the program delivery continue to work to consider the efficacy of their approach and potential alternatives to indicate treatment gain.

Another consideration when reviewing the results of this or any study is the reliability of the measures being used. As reported in Chapter III, Cronbach's alpha coefficients measuring internal consistency for the PICTS and CRAI scales ranged from .55 to .88 and .55 to .84 respectively. DeVellis (1991) suggested that an alpha level of .70 is considered adequate for reliable test construction. An alpha level of .70 indicates that that is the proportion of the scale's variance that is attributable to the particular construct. Additionally, the higher the alpha, the more power the scale has in measuring the particular latent variable underlying the items. A review of the PICTS, Current Criminal Thinking scale psychometric properties reveals that that scale has an alpha coefficient of .88. A review of the CRAI scales reveals that only the Psychopathology and Alcohol scales obtained an alpha equal to or greater than .70. The Victim (.65), Personal (.62), Society (.62), and Random (.55) scales obtained alphas of less than .70. To the extent that lower than optimal coefficient alpha's of some of the CRAI scales may have been a factor leading to nonsignificant results is not known (especially those that had alpha's approaching .70 or higher). However, the Random scale alpha is low. Perhaps when using the CRAI scales in the future, one might consider excluding use of the Random scale.

#### Additional Problems and Suggestions

The present study is not without its shortcomings especially in consideration of the relative small number of participants, which makes for difficulty in realizing



treatment effects. Incorporating a long-term program evaluation protocol would serve to incorporate more participants as well as benefit treatment providers to better understand the efficacy of their efforts. In addition to incorporating an evaluative protocol to assess treatment gain, asking all who are incarcerated at the NDDOCR to complete questionnaires upon admittance to the prison and upon release (requiring approximately two hours of their time) would indicate the nature of general change as a result of being incarcerated. Obviously, the more information and data that are compiled, the more information and understanding one will gain.

One must also consider the validity of the responses of those completing questionnaires. As mentioned previously, offenders often view prison officials as the enemy and feel resentful of the prison staff. It would not be an unjustifiable assumption to consider that some participants are not being completely forthright when completing questionnaires. In fact, upon review of some of the protocols, this researcher realized that some participants tended to circle answers to suggest no past criminal thinking or behavior (as indicated by the participant whose change score was adjusted). To the extent that one can evaluate the validity of the measures used in the present study at this point is not known, however taking steps to monitor the truthfulness of the responses are in order. For example, upon review of completed protocols, one might further question a respondent whose answers appeared to be extremely defensive or overly criminal-like or implement a social desirability measure in order to ascertain the true nature or validity of the responses. Such an approach was beyond the ability of the present researcher as access to the participants was limited due to the secure nature of the institution (allowing nonemployed persons into the facility requires additional resources and time from

NDDOCR personnel) and the relatively long distance between this researcher's residence and the prison (approximately 1,000 miles).

A particular difficulty in completing the present study was the general logistical problems and the difficulty in maintaining a clear line of communication with the prison officials involved in the study. On several occasions, a clear understanding of what was required to maintain experimental integrity seemed unknown by those personnel involved which made for a frustrating experience at both ends. Again, this researcher initially lived several hours away and eventually several states away from the prison. Because the principle investigator was not on site, extended efforts by prison personnel to provide the necessary data and information to complete the study were necessary. Optimally, studies such as the present one would be implemented and maintained by on-site personnel or a researcher who has an easier access to information and the workings of the institution involved. It became obvious to this researcher that the personnel involved in assisting with the study were very much involved with their more immediate jobs and had the daily demands of those jobs to consider first.

To complement a study such as the present one, additional information to evaluate effectiveness would likely prove beneficial. For example, incorporating data to include institutional violations may prove helpful to understand whether participants have gained the ability to incorporate what is being learned in actual situations or relationships. Realizing significant results within the institution may be reason enough to maintain programming. Additionally, incorporating data on recidivism into the program evaluation process would also serve to provide a more comprehensive evaluation regarding the effectiveness of the treatment program as well as the long-term effects.

Another approach to provide a more comprehensive evaluation of the effectiveness of a treatment program would be to assess each participant at differing points during his incarceration. For example, conducting posttest measures immediately following treatment and again at certain timed intervals (e.g., every six months) would reveal the extent to which change in criminal thinking is maintained over time. Several evaluations over the course of time may reveal whether the participant has actually incorporated and maintained the knowledge he gained from treatment. In the present study, all posttest measures were completed at one time—immediately following completion by the last of those receiving the treatment. It was not known by this researcher the order in which participants completed the treatment program. Had that been known and had this researcher the ability to visit the prison at will, an evaluation of the effect of time on criminal thinking could have been incorporated into the study. Alternatively, each participant could have been evaluated at precisely the same time (e.g., immediately following completion of the program) so as not to enlist the effects of time on the outcome.

### Conclusion

Perhaps the results of the present study may indicate, in general, that the treatment provided by the NDDOCR to change criminal thinking has no significant effects. However, a more accurate assessment of the program and the present study would suggest that the results are incomplete. Most recognizable when considering the incomplete nature of the study is the small N. With a larger N, especially for the treatment group, more if not all of the main hypotheses might have been realized. As indicated by a review of the pre- and posttest means, all posttest means were lower for



the treatment group (indicating less criminal thinking). A more complete study would include more participants. Acquiring more participants requires only more time and continued commitment by a researcher and, in this case, more time and commitment by personnel at the NDDOCR.

More than only realizing the modest results of the present study, this researcher and perhaps others, have realized the difficulty in conducting research to evaluate programming. Implementing and maintaining a strict experimental protocol is much easier said than done. Again, a major difficulty faced with the present study was the inability of the primary investigator to obtain information, work to maintain scientific rigor, and generally to follow up on problems as they arouse. Because of these problems, it seems imperative that the principal individual conducting the research, be near to and have easy access to the site and those individuals who are participating.

At this point, the interested reader should be reminded that the United States continues to incarcerate more offenders than any other industrialized nation. While some measures may be taken to reduce offending behavior in general (e.g., modern security and policing; youth programs) treatment for offenders is necessary. Perhaps the incarcerated offender should be given first priority when targeting money and attention to curb crime, as the current and potential future costs to police, adjudicate and then house offenders are high. Additionally, society may be obliged to assist the offender in living a potentially more satisfying life (without future incarceration) as well as consider efforts to protect the general public.

Currently, cognitive treatment for offending behavior is quite popular (Baro, 1999), even though the effectiveness of such programs are not always well known. While

the present study did not indicate that treatment is effective, it lays the groundwork for a program evaluation protocol and reveals some stumbling blocks that those interested in establishing evaluative measures might encounter. As shown by the present study, implementing an experimental research project is difficult, but can be done. Again, not only does a study such as the present serve to evaluate programming, but serves to reveal problematic research issues. Additionally, the present study and hopefully future studies will serve to reveal the utility of this type of research as well as serve to improve research methods.

For those involved in the present research, the efforts might serve as a pilot study for a more comprehensive, long-term evaluation of the cognition of the offenders at the NDDOCR (regarding criminality) and the effects of the Options program. At this point the groundwork has been laid regarding how to implement the evaluation procedures, what is required to maintain the present type of program evaluation, and what evaluative procedures are needed. The next step is to take what has been learned thus far and use that knowledge to incorporate a program evaluation protocol that will serve the NDDOCR in maintaining its commitment to a high standard of rehabilitation for its population.

## APPENDIX A

### PSYCHOLOGICAL INVENTORY OF CRIMINAL THINKING STYLES

(Version 4.0)

Glenn D. Walters, Ph.D.

Name \_\_\_\_\_ Reg. No. \_\_\_\_\_ Date \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_ Race \_\_\_\_\_ Education \_\_\_\_\_ Marital \_\_\_\_\_

Confining Offense \_\_\_\_\_ Sentence \_\_\_\_\_

Directions: The following items, if answered honestly, are designed to help you better understand your thinking and behavior. Please take the time to complete each of the 80 items on this inventory using the four-point scale defined below:

4 = strongly agree (SA)

3 = agree (A)

2 = uncertain (U)

1 = disagree (D)

SA A U D

1. I will allow nothing to get in the way of me getting what I want.....4 3 2 1
2. I find myself blaming society and external circumstances for the problems  
I have had in life.....4 3 2 1
3. Change can be scary.....4 3 2 1
4. Even though I may start out with the best of intentions I have trouble  
remaining focused and staying "on track".....4 3 2 1
5. There is nothing I can't do if I try hard enough.....4 3 2 1
6. When pressured by life's problems I have said "the hell with it" and  
followed this up by using drugs or engaging in crime.....4 3 2 1
7. It's unsettling not knowing what the future holds.....4 3 2 1



8. I have found myself blaming the victims of some of my crimes by saying things like "they deserved what they got" or "they should have known better"..... 4 3 2 1
9. One of the first things I consider in sizing up another person is whether they look strong or weak..... 4 3 2 1
10. I occasionally think of things too horrible to talk about..... 4 3 2 1
11. I am afraid of losing my mind..... 4 3 2 1
12. The way I look at it, I've paid my dues and am therefore justified in taking what I want..... 4 3 2 1
13. The more I got away with crime the more I thought there was no way the police or authorities would ever catch up with me..... 4 3 2 1
15. I have helped out friends and family with money acquired illegally..... 4 3 2 1
16. I am uncritical of my thoughts and ideas to the point that I ignore the problems and difficulties associated with these plans until it is too late..... 4 3 2 1
17. It is unfair that I have been imprisoned for my crimes when bank presidents, lawyers, and politicians get away with all sorts of illegal and unethical behavior every day..... 4 3 2 1
18. I find myself arguing with others over relatively trivial matters..... 4 3 2 1
19. I can honestly say that the welfare of my victims was something I took into account when I committed my crimes..... 4 3 2 1
20. When frustrated I find myself saying "fuck it" and then engaging in some irresponsible or irrational act..... 4 3 2 1
21. New challenges and situations make me nervous..... 4 3 2 1
22. Even when I got caught for a crime I would convince myself that there was no way they would convict me or send me to prison..... 4 3 2 1
23. I find myself taking shortcuts, even if I know these shortcuts will interfere with my ability to achieve certain long-term goals..... 4 3 2 1
24. When not in control of a situation I feel weak and helpless and experience a desire to exert power over others..... 4 3 2 1

25. Despite the criminal life I have led, deep down I am basically a good person..... 4 3 2 1
26. I will frequently start an activity, project, or job but then never finish it.....4 3 2 1
27. I regularly hear voices and see visions which others do not hear or see.....4 3 2 1
28. When it's all said and done, society owes me.....4 3 2 1
29. I have said to myself more than once that if it wasn't for someone "snitching" on me I would have never gotten caught..... 4 3 2 1
30. I tend to let things go which should probably be attended to, based on my belief that they will work themselves out.....4 3 2 1
31. I have used alcohol or drugs to eliminate fear or apprehension before committing a crime..... 4 3 2 1
32. I have made mistakes in life.....4 3 2 1
33. On the streets I would tell myself I needed to rob or steal in order to continue living the life I had coming..... 4 3 2 1
34. I like to be on center stage in my relationships and conversations with others, controlling things as much as possible..... 4 3 2 1
35. When questioned about my motives for engaging in crime, I have justified my behavior by pointing out how hard my life has been..... 4 3 2 1
36. I have trouble following through on good initial intentions ..... 4 3 2 1
37. I find myself expressing tender feelings toward animals or little children in order to make myself feel better after committing a crime or engaging in irresponsible behavior..... 4 3 2 1
38. There have been times in my life when I felt I was above the law..... 4 3 2 1
39. It seems that I have trouble concentrating on the simplest of tasks.....4 3 2 1
40. I tend to act impulsively under stress..... 4 3 2 1
41. Why should I be made to appear worthless in front of friends and family when it is so easy to take from others.....4 3 2 1
42. I have often not tried something out of fear that I might fail.....4 3 2 1

43. I tend to put off until tomorrow what should have been done today..... 4 3 2 1
44. Although I have always realized that I might get caught for a crime, I  
would tell myself that there was "no way they would catch me this time"..... 4 3 2 1
45. I have justified selling drugs, burglarizing homes, or robbing banks by  
telling myself that if I didn't do it someone else would.....4 3 2 1
46. I find it difficult to commit myself to something I am not sure of  
because of fear..... 4 3 2 1
47. People have difficulty understanding me because I tend to jump around  
from subject to subject when talking.....4 3 2 1
48. There is nothing more frightening than change.....4 3 2 1
49. Nobody tells me what to do and if they try I will respond with intimidation,  
threats, or I might even get physically aggressive..... 4 3 2 1
50. When I commit a crime or act irresponsibly I will perform a "good deed"  
or do something nice for someone as a way of making up for the harm I have  
caused..... 4 3 2 1
51. I have difficulty critically evaluating my thoughts, ideas, and plans.....4 3 2 1
52. Nobody before or after can do it better than me because I am stronger,  
smarter, or slicker than most people.....4 3 2 1
53. I have rationalized my irresponsible actions with such statements as  
"everybody else is doing it so why shouldn't I"..... 4 3 2 1
54. If challenged I will sometimes go along by saying "yeah, you're right,"  
even when I know the other person is wrong, because it's easier than  
arguing with them about it..... 4 3 2 1
55. Fear of change has made it difficult for me to be successful in life..... 4 3 2 1
56. The way I look at it I'm not really a criminal because I never intended to  
hurt anyone.....4 3 2 1
57. I still find myself saying "the hell with working a regular job, I'll just  
take it" .....4 3 2 1
58. I sometimes wish I could take back certain things I have said or done..... 4 3 2 1



59. Looking back over my life I can see now that I lacked direction and consistency of purpose.....4 3 2 1
60. Strange odors, for which there is no explanation, come to me for no apparent reason.....4 3 2 1
61. When on the streets I believed I could use drugs and avoid the negative consequences (addiction, compulsive use) that I observed in others..... 4 3 2 1
62. I tend to be rather easily sidetracked so that I rarely finish what I start..... 4 3 2 1
63. If there is a short-cut or easy way around something I will find it..... 4 3 2 1
64. I have trouble controlling my angry feelings..... 4 3 2 1
65. I believe that I am a special person and that my situation deserves special consideration..... 4 3 2 1
66. There is nothing worse than being seen as weak or helpless..... . 4 3 2 1
67. I view the positive things I have done for others as making up for the negative things..... 4 3 2 1
68. Even when I set goals I frequently do not obtain them because I am distracted by events going on around me..... 4 3 2 1
69. There have been times when I tried to change but was prevented from doing so because of fear..... 4 3 2 1
70. When frustrated I will throw rational thought to the wind with such statements as "fuck it" or "the hell with it" ..... 4 3 2 1
71. I have told myself that I would never have had to engage in crime if I had had a good job..... 4 3 2 1
72. I can see that my life would be more satisfying if I could learn to make better decisions..... 4 3 2 1
73. There have been times when I have felt entitled to break the law in order to pay for a vacation, new car, or expensive clothing that I told myself I needed...4 3 2 1
74. I rarely considered the consequences of my actions when I was in the community..... 4 3 2 1

75. A significant portion of my life on the streets was spent trying to control people and situations..... 4 3 2 1
76. When I first began breaking the law I was very cautious, but as time went by and I didn't get caught I became overconfident and convinced myself that I could do just about anything and get away with it..... 4 3 2 1
77. As I look back on it now, I was a pretty good guy even though I was involved in crime.....4 3 2 1
78. There have been times when I have made plans to do something with my family and then cancelled these plans so that I could hang out with my friends, use drugs, or commit crimes..... 4 3 2 1
79. I tend to push problems to the side rather than dealing with them..... 4 3 2 1
80. I have used good behavior (abstaining from crime for a period of time) or various situations (fight with a spouse) to give myself permission to commit a crime or engage in other irresponsible activities such as using drugs..... 4 3 2 1

APPENDIX B  
LIST OF SCALES

Psychological Inventory of Criminal Thinking Styles

Scales:

Validity scales:

Confusion scale (Cf-r)

Defensiveness scale (Df-r)

Thinking Style Scales:

Mollification scale (Mo)

Cutoff scale (Co)

Entitlement scale (En)

Power Orientation scale (Po)

Sentimentality scale (Sn)

Superoptimism scale (So)

Cognitive Indolence scale (Ci)

Discontinuity scale (Ds)

Factor scales:

Problem Avoidance scale (PRB)

Interpersonal Hostility scale (HOS)



Self-Assertion scale (AST)

Denial of Harm scale (DNH)

Content scales:

Current Criminal Thinking scale (CUR)

Historical Criminal Thinking scale (HIS)

Fear of Change scale (FOC)

APPENDIX C  
CRIMINAL ATTRIBUTION INVENTORY  
CRAI

Below are some statements on how people view crime. Read each statement carefully and decide if you agree or disagree. If you agree with the statement, mark the answer sheet "A". If you disagree with the statement, mark the answer sheet "D". For these statements, crime is what YOU know the average type of crime to be.

Please Answer All The Questions

1. Being crime free is a result of the one's personality.
2. One cannot blame alcohol for crime.
3. The victim has a part in the beginning of many crimes.
4. Rarely does a crime occur because of weird thinking.
5. Current societal morality is the cause of many crimes.
6. Most crimes occur because people intend to do crime.
7. A person's traits have very little to do with doing crime.
8. Alcohol can be blamed for most crimes.
9. Victims of crime are usually innocent bystanders.
10. Criminal behavior is often caused by mental illness.
11. Society's rigid rules have very little to do with criminal behavior.
12. Most crimes have no cause, they just happen.
13. Crimes occur because of lifelong traits inside the person.
14. Alcohol does not cause criminal behavior.

15. Victims of crime often exaggerate what happened to them.
16. Doing crime and having a mental illness are totally separate.
17. When crime occurs, society should be partially blamed.
18. The view that crime just happens does not hold water.
19. Crime is not caused by one's personality.
20. Alcohol makes people commit crime.
21. It is unfair to blame victims for crime.
22. People who have mental problems are more likely to do crime.
23. Society and its rules have little to do with crime occurring.
24. For the most part, people get involved in crime by chance.
25. People who do crime do so because of their personality traits.
26. A person's crime cannot be blamed on drinking.
27. When a crime occurs, victims have some choice as to their involvement.
28. Doing crime has very little to do with bizarre thinking.
29. General society contributes to much of the violence on the street.
30. Most crimes have a specific cause.
31. One's type of personality has nothing to do with committing crime.
32. High crime rates are related to drinking.
33. Thinking that a victim can contribute to crime is wrong.
34. Crime can be blamed on being somewhat messed-up psychologically.
35. It is difficult to see how society can be blamed for crime.
36. Unexpected events can result in crime.
37. People with a lot of positive traits do less crime.
38. Blaming alcohol for the majority of crime does NOT make sense.



39. Victims frequently add to their stories.
40. Crime occurs because of many reasons, but it is not due to bizarre thinking.
41. Society supports behaviors which are related to crime.
42. The belief that crime can happen by chance is wrong.
43. People are wrong to believe that the way one lives is related to crime.
44. Alcohol can be blamed for a lot of crime.
45. A victim's behavior is not related to crime.
46. A person who commits a crime is emotionally disturbed.
47. Authority in society is not related to doing crime.
48. A lot of crime happens when people are in the wrong place at the wrong time.
49. Good lifelong habits prevent people from getting into trouble.
50. Alcohol has very little to do with crime.
51. Victims should feel some responsibility.
52. Being mentally sick has nothing to do with crime.
53. Society's mess contributes to crime.
54. Crime is not likely to happen at random.
55. A positive lifestyle is not related to being crime free.
56. Drinking a lot of alcohol can result in crime.
57. Crime cannot be blamed on the victim.
58. Most crimes are related to mental difficulties.
59. Society cannot cause crime.
60. Sometimes crime just happens.

## APPENDIX D

### SOCIAL SCIENCES/BEHAVIORAL ADULT INFORMED CONSENT

North Dakota Department of Human Services  
Information for People Who Take Part in Research Studies

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The following information is being presented to help you decide whether or not you want to be a part of a minimal risk research study. Please read carefully. If you do not understand something, ask the Person in Charge of the Study.

**Title of Study:** Offender Treatment: An Evaluation of a Cognitive Restructuring Program  
**Principal Investigator:** Randy L. Telander  
**Study Location(s):** North Dakota Department of Corrections and Rehabilitation, Bismarck, ND;  
Jamestown, ND

You are being asked to participate in this study in order to help the researcher to better understand the extent to which current programming provided to offenders by the North Dakota Department of Corrections and Rehabilitation, is useful and helpful to offenders. Because it is important to provide treatment that helps offenders to change their past behavior, and because treatment is funded by the general public (including offenders), it is important to know whether the treatment is effective. It is also important to evaluate the programs offered to offenders in order to understand the most effective way to provide treatment and who benefits most. The current study is designed to answer these questions. The principal investigator in this study is Randy L. Telander. Randy is a graduate student in counseling psychology at the University of North Dakota. The current study serves as his dissertation research, which is required before completion of his doctoral degree.

#### General Information about the Research Study

The purpose of this research study is to evaluate the extent to which the Options program, provided to offenders by the North Dakota Department of Corrections and Rehabilitation, is useful. The Options program is designed to assist individuals who have committed criminal acts to evaluate their thinking styles and behavior and to offer alternative solutions to unproductive thinking. The present study will evaluate the extent to which thinking (related to criminal behavior) has changed after completing the Options program. The results of the study will assist officials and treatment providers in knowing whether they are helping offenders, who benefits most from the program, and generally how best to provide program services.

#### Plan of Study

- After signing this form, each participant will be asked to complete two questionnaires in which he will answer several questions regarding his general thinking style and thoughts regarding criminal behavior. Completing both of the questionnaires will require approximately one hour of time. The participants will be divided into two groups. After completing the questionnaires, Group 1 will be excused and only required to complete the same questionnaires (requiring one hour of time) again in approximately six months. After completing the questionnaires, Group 2 participants will enroll in the Options program. The Options program is an approximately four-month, group class requiring two meetings (for 1 ½ hours) each week. Upon completion of the Options program, Group 2 participants will be asked to complete both questionnaires again. All Group 1 participants who wish to be in the Options program may enroll after completion of the study. Finally, scores for each participant on two measures (Level of



Service Inventory and the Shipley Institute of Living Scale) that were administered by the North Dakota Department of Corrections and Rehabilitation will be accessed by the researcher and used in the study.

#### **Payment for Participation**

- All participants from Group 1 who completed the questionnaires (on both occasions) will have their names entered into a drawing for a 13-inch color television. All Group 2 participants, who have completed the Options program and questionnaires (before and after programming), will also have their names entered into a separate drawing for a 13-inch color television. Both prizes will be awarded after all participants from Group 2 have completed the Options program (6-7 months from now).

#### **Benefits of Being a Part of this Research Study**

- Each participant from Group 1 who completes the questionnaires will benefit from having the experience of being a participant in a controlled, scientific research study. Similar studies are continuously being conducted throughout the world in order to better understand human behavior and to provide services that benefit all human beings. Furthermore, participants will benefit from knowing, that because of their participation, better services will be provided to offenders in the future. In addition to the benefits described above, Group 2 participants will receive the benefits of having completed the Options program in which they will have gained a better understanding of their behavior as it relates to general thinking, criminal thinking, and how to possibly change their behavior in a positive way.

#### **Risks of Being a Part of this Research Study**

- The risks involved in this study are minimal. Group 2 participants may experience some mild anxiety while participating in the Options program. Being in the Options program requires participants to examine past and current thinking and behaving with may not have been positive. However, it is believed that the positive outcome of being involved in the Options program (the opportunity to think and behave in a more positive way), far out-weigh any negative consequences.

#### **Confidentiality of Your Records**

- All data, including the questionnaires and consent forms, will be stored separately in a locked file cabinet at the University of North Dakota Counseling Psychology Department, to protect your privacy to the full extent of the law. However, authorized research investigators, the Department of Health and Human Services, the North Dakota Department of Human Services' Institutional Review Board, and other entities/individuals as required or authorized by law, may inspect your records from this research project. No employee or official from the North Dakota Department of Corrections and Rehabilitation will have access to the records of this research project. All records/data will remain locked in a file cabinet at the UND Counseling Psychology Department for approximately three years after completion of the study. Only the principal investigator and his supervisor will have access to the data. After three years, all files/records will be permanently destroyed.
- The results of this study may be published. However, the data obtained from you will be combined with data from other people in the publication. The published results will not include your name or any other information that would in any way personally identify you.

#### **Volunteering to Be Part of this Research Study**

- Your decision to participate in this research study is completely voluntary. You are free to participate in this research study or to withdraw at any time. If you choose not to participate, or if you withdraw, there will be no penalty or loss of benefits that you are entitled to receive. Employees or officials at the North Dakota Department of Corrections and Rehabilitation will be told of your involvement in the study only as it may apply to providing services regarding participation in the Options program and to organize meetings for completing questionnaires. If you choose to withdraw from the study, simply indicate so when being asked to complete questionnaires or if you are in the treatment group, notify the Options program provider.

### Questions and Contacts

- If you have any questions about this research study, contact the principal investigator, Randy L. Telander, 718 Campbell Dr., Grand Forks, ND 58201, phone (701)780-9082, or his supervisor at the University of North Dakota, Dr. David Whitcomb, Department of Counseling, P.O. Box 8225, Grand Forks, ND 58202, Phone (701)777-3738. If you are interested in knowing the results of this study, contact Randy Telander or Dr. Whitcomb after completing the study.
- If you have questions about our rights as a person who is taking part in a research study, you may contact Dr. Christine Kuchler, Chair of the Department of Human Services' Institutional Review Board at 1-888-328-2662.

### Your Consent – By signing this form I agree that:

- I have fully read or have had read and explained to me this informed consent form describing a research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Printed Name of Participant

\_\_\_\_\_  
Date

### Investigator Statement

I have carefully explained to the subject the nature of the above protocol. I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks and benefits involved in participating in this study.

\_\_\_\_\_  
Signature of Investigator

Or Authorized Research Investigator  
Designated by the Principal Investigator

\_\_\_\_\_  
Randy L. Telander

\_\_\_\_\_  
Printed Name of Investigator

\_\_\_\_\_  
Date

### Institutional Approval of Study and Informed Consent

This research project/study and informed consent form were reviewed and approved by the North Dakota Department of Human Services' Institutional Review Board for the protection of human subjects. This approval is valid until the date provided below. The board may be contacted at 1-888-328-2662.

**Consent Form Approval Date:**

**Approved Consent Form Expiration Date:**

- If this informed consent form has an "approval expiration date" that expires before the completion of this research study, the Principal Investigator may contact you for your re-consent at the time of expiration.



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